

COORDINATED IMPLEMENTATION PLAN FOR BIRD CONSERVATION IN WESTERN MONTANA



D. Casey photo

**Montana Steering Committee
Intermountain West Joint Venture
2005**

Montana Steering Committee

Intermountain West Joint Venture

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1. Introduction

In 1986, the North American Waterfowl Management Plan (NAWMP) was adopted by the United States and Canada to address the conservation and restoration of waterfowl, other migratory waterbirds, and the habitats on which they depend. The Plan, as adopted, aims to restore waterfowl populations to 1970-79 levels and establishes specific population objectives for twenty-five species of ducks and five species of geese, plus trumpeter and tundra swans. It was updated in 1994 to include full participation by Mexico, and again in 1998 to include language strongly encouraging Plan partners to improve coordination with other wildlife initiatives, including those directed at other migratory birds, endangered species, fisheries and biodiversity. It was updated again in 2003.

Six public-private partnerships, or joint ventures, were originally established by the Plan to coordinate the implementation of NAWMP and achievement of population and habitat objectives along flyway lines across North America, with eight more joint ventures having been formed in recent years. These joint venture partnerships include active participation by the U.S. Fish and Wildlife Service (USFWS), USDA Forest Service (USFS), Bureau of Land Management (BLM), Natural Resources Conservation Service (NRCS) and other federal agencies, as well as state wildlife management agencies and a number of wildlife conservation groups, including Ducks Unlimited Inc., Pheasants Forever, The Nature Conservancy (TNC), and the National Audubon Society. The North American Wetlands Conservation Act (NAWCA) was established by Congress in 1989 to implement the objectives of NAWMP. This program, re-authorized by Congress in 2002 at \$75 million/year, encourages and rewards partnerships among all wildlife conservation initiatives through two matching grant programs: a standard grant program and a small grant program.

The Intermountain West Joint Venture (IWJV) was established in 1994 as the eleventh habitat joint venture. It encompasses parts of eleven Western states, including much of western Montana within the Northern Rockies Bird Conservation Region (BCR 10). Public agencies and conservation groups work as partners through the Montana Bird Conservation Partnership, which serves as the IWJV State Steering Committee for Montana, to identify, protect, restore and enhance wetlands and other important habitats for waterfowl and other migratory birds, as well as native resident birds such as Greater Sage-Grouse.

The Montana State Steering Committee for IWJV includes representatives from the American Bird Conservancy, Montana Department of Fish, Wildlife and Parks, U.S. Fish and Wildlife Service, Bureau of Land Management, U.S. Forest Service, Ducks Unlimited Inc., University of Montana, Montana Audubon, Plum Creek Timber Company, Confederated Salish and Kootenai Tribes, Montana Natural Heritage Program, and The Nature Conservancy of Montana.

In 1995 the IWJV Management Board adopted an Implementation Plan, which was intended to provide a framework for implementing the NAWMP in Montana and other states of the Intermountain West, and for developing more specific wetland focus area plans in each of those states. The Montana Steering Committee delineated 9 original wetland focus areas, which were incorporated into the larger IWJV Implementation Plan, adopted in December 1995:

- Upper Bighole
- Red Rock – Horse Prairie
- Beaverhead River
- Hebgen Lake
- Madison River
- Gallatin Valley
- Townsend
- Smith / Shields Valley
- Musselshell River- Crazy Mountains

Lincoln County was formally also identified as a focal area, but no specific wetland complexes were ever singled out for conservation attention.

Waterfowl objectives have been established for the Intermountain West and for Montana by the IWJV Management Board, and are included in the 1995 IWJV Implementation Plan. In 2001 the IWJV Management Board determined that the 1995 IWJV Implementation Plan should be updated and that it should be completed from the ground up, state by state. The Board also decided that this updated planning process should attempt to coordinate NAWMP and joint venture objectives with other existing bird initiatives operating within the Intermountain West region. That same year, the Board funded a project to work with state steering committees in developing coordinated “all bird” implementation plans for all the states of the Intermountain West Joint Venture. The Montana Steering Committee, through the Montana Bird Conservation Partnership, met on a number of occasions in 2002 and 2003 to work on developing this state implementation plan.

This coordinated “all bird” implementation plan for Western Montana will not only contribute to an updated and expanded overall IWJV Implementation Plan, it will assist the IWJV Management Board in considering and ranking various habitat protection, restoration and enhancement projects for funding via the NAWCA and other programs. Our vision is that it will serve as a primary source book for local partnerships in western Montana as they develop and implement habitat conservation projects. It will, therefore, assist the Montana IWJV Steering Committee in their review and prioritization of cost-share projects submitted to the IWJV.

Currently the area covered by this plan includes the “Five Valleys” portion of the Prairie Pothole Joint Venture. The Steering Committee felt that local partnerships would be most empowered by an implementation plan that was geographically comprehensive for the western portion of the state. In addition, all major bird initiative plans now identify conservation priorities by BCR. It is logical that statewide priorities have their origin in BCR objectives. The PPJV is also currently re-writing their implementation plan. As these plans are finalized, the Steering Committee will work with the PPJV to accommodate and integrate plans in a way that best meets the needs of local partners.

2. Planning Objectives for Western Montana

1. Create a planning forum, through the Montana Bird Conservation Partnership, in which representatives of state, tribal, and federal conservation agencies, private industry, and wildlife conservation groups work collaboratively to develop coordinated habitat objectives and projects for the Intermountain West Joint Venture which addresses the conservation needs of all bird species in the BCR10 portion of western Montana.
2. Review, merge and synthesize the goals and objectives of existing bird conservation plans into a planning document that reflects the coordinated species and habitat priorities of bird conservation programs in Montana. This document is intended to guide the Management Board of the Intermountain West Joint Venture (IWJV) in implementing and updating statewide IWJV goals and objectives for future bird conservation in the BCR 10 portion of western Montana (BCR 10).

3. Direction and Connections

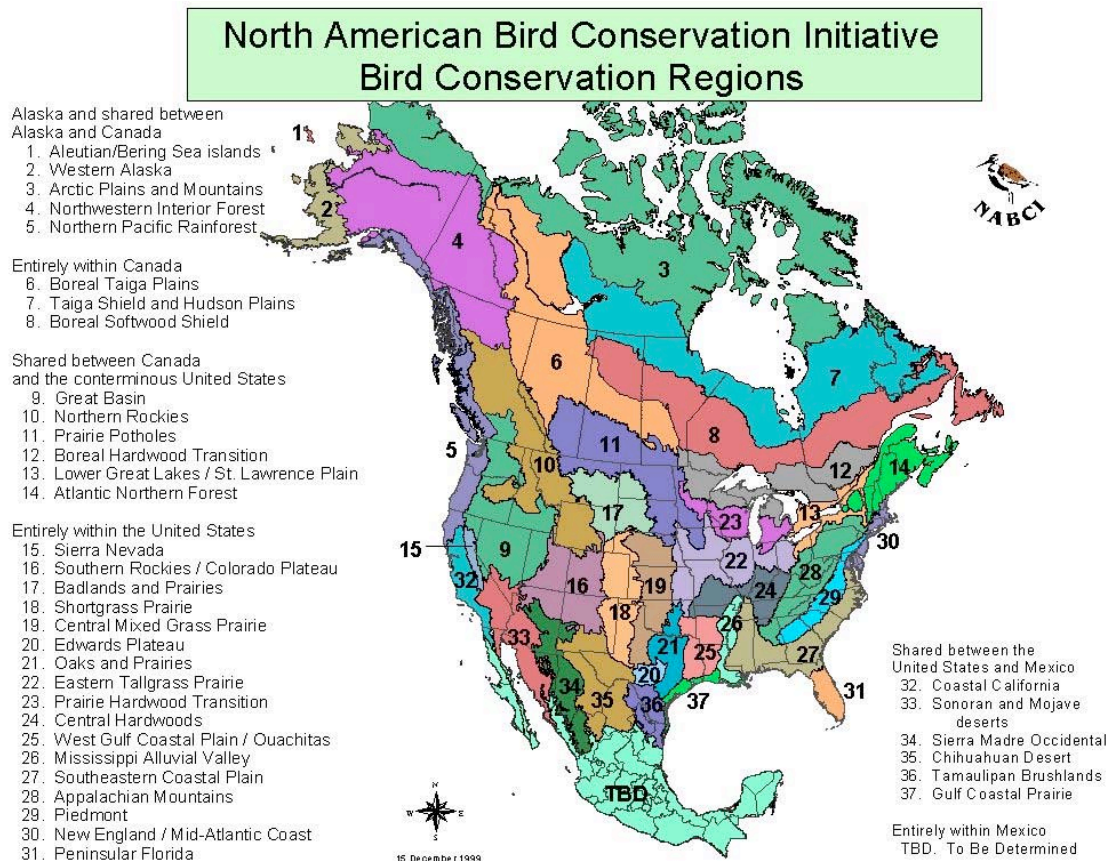
By taking a lead role in coordinated implementation planning in the Western states, the IWJV Management Board is following the direction of the **North American Waterfowl Management Plan** (NAWMP—1998/2003 updates). IWJV is also responding to direction and recommendations from other national sources and programs to attempt coordination of waterfowl and wetland habitat planning with the identified goals of other bird conservation programs. These other national sources and programs include:

North American Bird Conservation Initiative (NABCI): NABCI was formed in 1998 as an international forum for public and private efforts to coordinate international conservation efforts of existing major bird initiatives. One goal of NABCI is to increase the effectiveness of, and coordination between, existing and new bird conservation initiatives, including NAWMP. As a recommended framework for coordinated bird management, NABCI has adopted and mapped ecological units called Bird Conservation Regions (BCRs; **Figure 1**), a number of which cover the area of the Intermountain West Joint Venture. Montana is covered by three BCRs (BCR 10, 11, 17; **Figure 2**). This implementation plan will consider only that portion of the state in BCR10. The American Bird Conservancy hired a BCR Coordinator in 2000 for the Northern Rockies BCR. A big part of his responsibilities is working with IWJV partners to coordinate planning and project design for bird habitat projects in Montana and other states (and British Columbia) within the Northern Rockies BCR. As the “all bird” planning process moves forward, the BCRs defined by NABCI will probably prove to be the most relevant ecological regions for migratory bird planning and management all over the West.

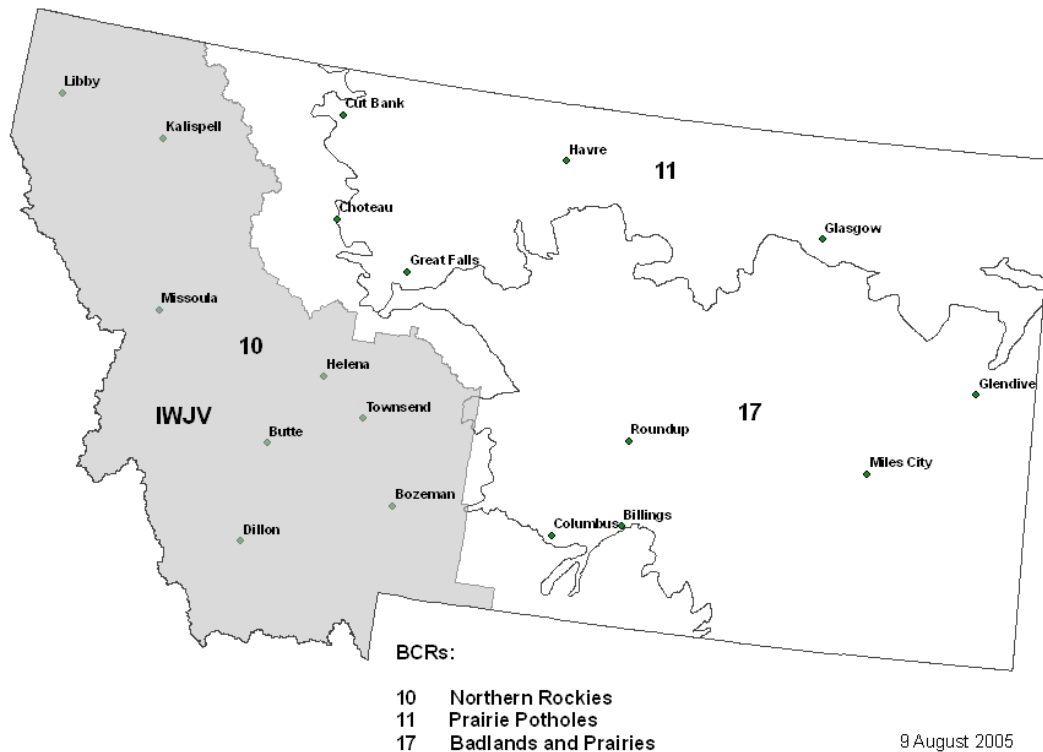
The **International Association of Fish and Wildlife Agencies (IAFWA)** was founded in 1902 as a quasi-governmental organization of public agencies, including state wildlife agencies charged with the protection and management of North America’s fish and wildlife resources. IAFWA received a federal grant in FY/2001 to conduct “integrated all bird” conservation planning workshops for state wildlife agencies in FY/2001-2003. Since the national objectives of this grant closely parallel the IWJV’s coordinated migratory bird planning effort, the IWJV worked with IAFWA staff to ensure that the workshops were complementary. Workshops were conducted in Colorado and Arizona in 2002 and Idaho in 2003; a joint

Montana/Wyoming workshop was held in Billings in August 2003. That workshop was attended by >95 participants from land management and regulatory agencies, conservation organizations, industry, and the public at large, and generated strong support for the concept of coordinated bird conservation in Montana.

Figure 1 – Continental Bird Conservation Regions defined by NABCI



U.S. Congress: Congress strongly supports a public-private partnership approach to protecting and restoring wetlands and other important migratory bird habitats across North America, and they have signaled their support by increasing the federal funds available for migratory bird initiatives. In FY/2001, Congress re-authorized NAWCA and increased its authorized annual funding level from \$30 million to \$50 million and the FY/2001 appropriation for NAWCA was increased to \$40 million, from \$15 million in FY/2000. In FY/2002 Congress again increased the funding level for NAWCA to \$43.5 million and in November 2002 re-authorized NAWCA again, with an anticipated increase to \$75 million/year by 2007. Congress also recommended a phased-in approach to fully funding the 15 habitat and species joint ventures that were in place in FY/2001, making it clear in budget language that Congress regards these joint ventures as the future primary delivery system for all federally-funded migratory bird programs. In its FY/2001 Interior Appropriations language, the House noted that the joint venture program “continues to be one of the greatest successes of the (Fish and Wildlife) Service, with funding leveraged to a greater extent than all other Service programs combined”.

Figure 2 – Bird Conservation Regions in Montana

Congress also passed a new Neotropical Migratory Bird Conservation Act (H.R.2217) in 2002, funding the new Act with an initial \$3 million for a matching grants program, and created a new State Wildlife Grant (SWG) program within federal budgets, which provides funding to state wildlife agencies for wildlife planning and conservation. Montana Fish, Wildlife and Parks (MFWP) is currently preparing a comprehensive wildlife management plan using SWG funds, and because it will be based on the same conservation plans considered here, we anticipate that the objectives of that plan and this will be mostly coincident. Indications at our Montana Bird Conservation Partnership meeting in November 2004 are that higher priority ecoregions identified by the Montana Comprehensive Wildlife Conservation Strategy in western MT mirror our Bird Habitat Conservation Areas.

Executive Order 13186 – Protection of Migratory Birds: In January, 2001 outgoing President Bill Clinton signed an executive order requiring all federal agencies which might have a measurable negative impact on migratory birds to develop a Memorandum of Understanding (MOU) with the U.S. Fish and Wildlife Service, to promote the recommendations of NAWMP, NABCI and other migratory bird programs, as well as other conservation considerations. The BLM and USFS developed a draft MOU with the USFWS in 2001, which emphasizes a collaborative approach to migratory bird conservation, in cooperation with other agencies and organizations. Because this executive order addresses the integration of bird conservation principles, habitat restoration for migratory birds, and comprehensive planning among various

bird conservation programs, these coordinated implementation plans developed by the IWJV should assist these federal agencies with implementation of the MOU. Other federal agencies will presumably also develop MOUs with the Fish and Wildlife Service to implement Executive Order 13186.

This presidential Executive Order was reinforced by the Bush Administration on September 12, 2002 when U.S. Fish and Wildlife Service Director Steve Williams issued **Director's Order No. 146**, which indicates, among other things, that joint ventures should deliver the full spectrum of bird conservation.

4. Migratory Bird Conservation Initiatives

There are four migratory bird initiatives for which national, regional and state plans have been or are being developed. The following programs have different but compatible approaches to planning for bird conservation, but the goals, objectives, and priorities of each were considered in the development of this IWJV Coordinated Implementation Plan for Bird Conservation in Western Montana. **Appendix A** is a combined list of the priority species from these plans.

North American Waterfowl Management Plan (NAWMP): Adopted by the United States and Canada in 1986 and by Mexico in 1994, to address the conservation and restoration of waterfowl, other migratory waterbirds, and the habitats on which they depend. The Plan, as adopted and updated (NAWMP Committee 2003), aims to restore waterfowl populations to 1970-79 levels and establishes specific population objectives for twenty-five species of ducks, five species of geese, plus trumpeter and tundra swans. Tiering directly from NAWMP, the North American Wetlands Conservation Act (NAWCA) identifies 10 high priority and 10 other priority waterfowl species, including 11 species that occur in Montana (**Table 1**)

Table 1 – Priority Waterfowl Species from NAWMP and NAWCA in Montana

High Priority:	Other Priority Species:
Mallard	Greater White-fronted Goose
Northern Pintail	Snow Goose
Greater Scaup	Wood Duck
Lesser Scaup	American Wigeon
	Canvasback
	Redhead
	Ring-necked Duck

The IWJV is one of eleven public-private partnerships established to coordinate the implementation of NAWMP and the achievement of population and habitat objectives along flyway lines across North America. Public agencies and conservation groups work as partners through an IWJV State Steering Committee in Montana (Montana Bird Conservation Partnership) to identify, protect, restore and enhance wetlands and other important habitats for waterfowl and other migratory birds, as well as native non-migratory birds such as sage grouse.

Partners in Flight: The national PIF program began in 1989 as a coordinated effort to document and reverse apparent declines in the populations of neotropical migratory birds, those

birds that breed north of Mexico and then migrate to Mexico, Central and South America and the Caribbean in the winter months. The National Fish and Wildlife Foundation (NFWF) took the lead in bringing together federal, state, and local government agencies, foundations, conservation groups, industry and the academic community to address the problem of population declines. The reasons are complex, and include loss of breeding habitat due to fragmentation, alteration, urban expansion and natural disasters; loss or alteration of habitat in non-breeding areas and along migratory routes; and brood parasitism. The PIF program was later expanded to include all non-game landbirds.

Today PIF is an international program, with PIF working groups in each western state. In 2000 the American Bird Conservancy (ABC) published the first comprehensive national plan for the program, titled *Partners in Flight: Conservation of the Land Birds of the United States* (Pashley, et al. 2000). That planning document summarized the goals and priorities of the various state Bird Conservation Plans, as well as 93 physiographic areas and seven generalized regions of the continental United States. It also encouraged better coordination with other initiatives such as the NAWMP, U.S. Shorebird Management Plan, and the North American Waterbird Conservation Plan. PIF initially divided Montana into two physiographic areas, but for purposes of coordinated bird conservation, these have now been replaced by the three BCRs mentioned on page 3 and shown in **Figure 1**. BCR 10 is part of the Intermountain avifaunal region identified in the latest PIF Continental Plan (Rich et al. 2004), which for the first time defines birds of continental concern for every region of the country, along with estimates of their population size. Passage of the Neotropical Migratory Bird Conservation Act in 2001 provided a new federal commitment to the conservation of neotropical migrant species addressed by Partners in Flight.

Montana PIF was formed in 1991 under the lead of Region 1 of the Forest Service, to direct resources of PIF partners to the conservation of birds and their habitats through cooperative efforts in the areas of monitoring, research, management and education. Montana PIF is a public-private partnership made up of professionals from state and federal natural resource agencies, universities, Native American tribes, private industry and nongovernmental organizations. Montana PIF efforts during the 1990's helped Montana partner agencies recognize the importance of neotropical migrant and resident landbirds, and led to one of the landmark bird monitoring programs in the U.S. the Landbird Monitoring Program of Region 1 of the USFS, in partnership with the University of Montana. A major emphasis of the group was to form statewide habitat committees to address priority conservation concerns through the development of a statewide Bird Conservation Plan (BCP). This was consistent with other western states, and indeed the development of these state-by state BCPs was coordinated and facilitated in part by the Western Working Group of PIF.

In January 2000 Montana PIF released Version 1.0 of the Montana BCP (Casey 2000), which was based on an assessment of the status of the >250 species of breeding birds in Montana, including waterfowl, shorebirds, waterbirds and especially ~200 species of landbirds. This assessment had its origins in the PIF prioritization database scores for the two physiographic areas overlapping the state, and identified 107 species of conservation concern in the state, including 57 considered to be High or Moderate Priority species (**Table 2**). These 107 species were organized into 16 habitats, each of which is treated separately in the BCP. The history,

current status and conservation concerns and opportunities in higher priority habitats are described in detail in the BCP, along with their importance to birds. Also included in the BCP are statewide habitat objectives, issues, strategies and tasks for implementing habitat objectives in these priority habitats.

Table 2 - High and Moderate Priority Species: Montana PIF (Casey 2000)

High Priority (Level I*)	Moderate Priority (Level II**)	
Common Loon	Horned Grebe	Calliope Hummingbird
Trumpeter Swan	White-faced Ibis	Lewis's Woodpecker
Harlequin Duck	Barrow's Goldeneye	Red-headed Woodpecker
Greater Sage-Grouse	Hooded Merganser	Red-naped Sapsucker
Piping Plover	Bald Eagle	Williamson's Sapsucker
Mountain Plover	Northern Goshawk	Three-toed Woodpecker
Interior Least Tern	Ferruginous Hawk	Pileated Woodpecker
Flammulated Owl	Peregrine Falcon	Willow Flycatcher
Burrowing Owl	Ruffed Grouse	Hammond's Flycatcher
Black-backed Woodpecker	Columbian Sharp-tailed Grouse	Cordilleran Flycatcher
Olive-sided Flycatcher	Long-billed Curlew	Winter Wren
Brown Creeper	Marbled Godwit	Veery
Sprague's Pipit	transient shorebirds	Loggerhead Shrike
Baird's Sparrow	Franklin's Gull	Red-eyed Vireo
	Caspian Tern	Lazuli Bunting
	Common Tern	Brewer's Sparrow
	Forster's Tern	Lark Bunting
	Black Tern	Grasshopper Sparrow
	Black-billed Cuckoo	McCown's Longspur
	Yellow-billed Cuckoo	Chestnut-collared Longspur
	Black Swift	Black Rosy-finch
	Vaux's Swift	

* Level I: Conservation Action. These are the species for which Montana has a clear obligation to implement conservation.

** Level II: "Monitoring": Species in need for which we have a responsibility, but with lesser threats or stable/increasing populations in the state. Montana has a responsibility to monitor the status of these species, and/or to design conservation actions to meet their needs.

For Montana the BCP (Casey 2000) remains the best statewide summary of species and associated habitat information, and is one of the primary sources of information used in developing a Coordinated Implementation Plan for Bird Conservation in Western Montana. But with the release of the new continental PIF plan in 2004, an additional six landbird species were identified as Watch List or Stewardship species which had not been recognized as priorities in the Montana Plan. These six species and additional priority species from the continental plan are cross walked with our state PIF plan priorities in **Table 3**.

Table 3 - Crosswalk of PIF priority species, Continental Plan (WatchList, Stewardship) and Montana Bird Conservation Plan

Species	Status	Objective ^{a/}	Intermountain ^{b/} (10)	Prairie ^{b/} (11/17)	MT PIF ^{c/}
Greater Sage-Grouse	W	incr. 100%	IM-stewardship	IM-stewardship	I
Blue Grouse	W	incr. 100%			III
Sharp-tailed Grouse	S	maintain		PR-stewardship	(II)
Bald Eagle	S	maintain			II
Swainson's Hawk	W	maintain/incr.	MA	MA	III
Peregrine Falcon	S	maintain			II
Flammulated Owl	W	maintain/incr.	PR		I
Short-eared Owl	W	incr. 100%		MA	III
Black Swift	W	incr. 50%	MA		II
White-throated Swift	W	incr. 100%	MA		
Calliope Hummingbird	W	maintain/incr.	PR-stewardship		II
Rufous Hummingbird	W	incr. 100%	MA		III
Lewis's Woodpecker	W	maintain/incr.	MA-stewardship		II
Red-headed Woodpecker	W	incr. 100%		MA	II
Williamson's Sapsucker	S	maintain	PR-stewardship		II
Red-naped Sapsucker	S	maintain	PR-stewardship		II
Black-backed Woodpecker	S	maintain			I
Olive-sided Flycatcher	W	incr. 100%	MA		I
Willow Flycatcher	W	incr. 50%	MA	MA	II
Dusky Flycatcher	S	maintain	PR-stewardship		
Pinyon Jay	W	incr. 100%	MA-stewardship		
Clark's Nutcracker	S	maintain	PR-stewardship		III
Chestnut-backed Chickadee	S	maintain			III
Winter Wren	S	maintain			II
Mountain Bluebird	S	maintain	PR-stewardship		
Varied Thrush	S	maintain			III
Sage Thrasher	S	maintain	PR-stewardship		III
Sprague's Pipit	W	incr. 100%		MA-stewardship	I
Nashville Warbler	S	maintain			III
Green-tailed Towhee	S	maintain	PR-stewardship		III
American Tree Sparrow (w)	S	maintain		PR-stewardship	
Brewer's Sparrow	W	incr. 100%	MA-stewardship		II
Sage Sparrow	S	maintain	PR-stewardship		
Lark Bunting	S	maintain		MA-stewardship	II
Grasshopper Sparrow	S	maintain		MA-stewardship	II
Baird's Sparrow	W	incr. 100%		IM-stewardship	I
Nelson's Sharp-tailed Sparrow	W	maintain		PR	III
McCown's Longspur	W	maintain/incr.	PR	PR-stewardship	II
Chestnut-collared Longspur	S	maintain		MA-stewardship	II
Yellow-headed Blackbird	S	maintain			III
Black Rosy-Finch	W	maintain/incr.	PR-stewardship		II
Cassin's Finch	S	maintain	MA-stewardship		III

^{a/} Population objectives based on trend since the inception of BBS: Increase 100%: those species that have declined by 50% or more; Increase 50%: those species with a 15-50% decline; Maintain/increase: Watch List species with uncertain trend; Maintain: Watch List species with stable or incr. populations, all Stewardship species.

^{b/} Recommended Conservation Action: IM: Immediate Action; MA: Management; PR: Long-term Planning and Responsibility.

^{c/} Montana PIF Priority Levels: I: Conservation Action; II: Monitoring; III: Local Concern

Shortly after finishing the Montana BCP, Montana PIF decided to reorganize state committees on a geographic, rather than a habitat basis. As partners moved into implementation of recommendations from the BCP, it was felt that specific project planning would be better facilitated by local partnerships. Simultaneously, a BCR coordinator was put in place for BCR10, and MFWP hired a Migratory Bird Coordinator. In the spirit of integration, they facilitated the formation of a **Montana Bird Conservation Partnership** in 2000 which, has met twice annually since. This outgrowth of Montana PIF is meant to serve as the “all-bird” infrastructure for the state. Montana PIF continues to exist as the “keepers of the plan” for landbird conservation in the state.

U.S. Shorebird Conservation Plan (USSCP): The term shorebird is applied in North America to a large group of birds commonly called sandpipers and plovers, but also includes oystercatchers, avocets, and stilts. Of 214 species of shorebirds found worldwide, 53 regularly occur in the United States and, although they are found at some time of the year in all 50 states, the biology and ecology of most shorebird species is poorly understood. Technical and regional working groups were convened to address some of the known conservation and research issues for shorebirds and in 2000, the USSCP was published by the Manomet Center for Conservation Sciences (Brown et al. 2001), funded by a grant from the U.S. Fish and Wildlife Service. This national plan provides baseline information on shorebird populations and habitat, and addresses some of the known challenges to shorebird conservation, including low reproductive potential and habitat loss. It also articulates hemispheric and national goals for restoring and stabilizing shorebird populations, especially those known to be in decline. These goals emphasize research, monitoring and cooperative landscape management strategies at the international, national, and regional levels. As with NABCI and the PIF plan, the USSCP encourages close coordination with other bird conservation initiatives, as well as implementation of shorebird conservation strategies through the IWJV and other habitat joint ventures established by NAWMP. The shorebird plan defines Shorebird Planning Regions across North America, which follow along the lines of NABCI BCRs. Montana is within the shorebird plan’s Intermountain West Shorebird Planning Region.

An **Intermountain West Regional Shorebird Plan (IWRSP)** also was released in 2000 (Oring et al. 2000). The plan notes that perhaps a million shorebirds breed in the Intermountain West and that millions more migrate through the area each year. The plan recognizes that finding ample high quality fresh water will be the greatest challenge faced by shorebirds in the Intermountain West. The regional plan articulates seven goals, plus associated objectives and strategies related to habitat management, monitoring and assessment, research, outreach and planning. The planning goal includes objectives to coordinate shorebird planning and projects with other migratory bird initiatives and specifically with the IWJV. The IWRSP identifies eleven species of shorebirds that regularly breed in the region, as well as 23 additional species that are annual migrants. IWRSP also recognizes eleven Key Shorebird Areas, none of which are in Western Montana. The IWRSP also identifies 79 Managed Shorebird Sites, the following 3 of which are in Western Montana: Lee Metcalf National Wildlife Refuge (NWR); Red Rock Lakes NWR and Freezout Lake Wildlife Management Area (WMA).

Some of the breeding shorebird species of particular concern in the Intermountain West states are listed in **Table 4**. These include the Long-billed Curlew, Snowy Plover, American Avocet,

Black-necked Stilt, Wilson's phalarope and 7 other species with scores of 4 or 5 in the shorebird plan's species scoring process. Five of these species breed regularly in Montana. The IWRSP, when revised, will provide the primary source of information for shorebird species and habitat objectives for the coordinated implementation plan for bird conservation in Montana. Shorebird species are shown within their associated critical habitats in **Appendix B**.

Table 4 - Shorebird Species of Concern, Intermountain West Region

Species:	Status:	Priority Level*:
Snowy Plover	Rare	5
Mountain Plover	Breeder	5
Black-necked Stilt	Breeder	5
American Avocet	Breeder	5
Long-billed Curlew	Breeder	5
Marbled Godwit	Breeder	4
Western Sandpiper	Breeder	4
Least Sandpiper	Migrant	4
Long-billed Dowitcher	Migrant	5
Wilson's Phalarope	Breeder	5
Red-necked Phalarope	Migrant	4

*Priority Level: 5 = critically important; 4 = very important; 3 = important

North American Waterbird Conservation Plan (NAWCP): The NAWCP provides a continental framework for conserving and managing colonial nesting waterbirds, including 209 species of seabirds, coastal waterbirds (gulls, terns, pelicans), wading birds (herons, ibises), and marsh birds, such as certain grebes and bitterns. The overall goal of the plan is to ensure that the distribution, diversity and abundance of populations, habitats (breeding, migratory, and non-breeding) and important sites of waterbirds are sustained or restored throughout their ranges in North America. The geographic scope of the plan covers 28 countries, from Canada to Panama, as well as islands and nearshore areas of the Atlantic, Pacific, Gulf of Mexico, and Caribbean Sea. As with NAWMP and PIF, the waterbird partnership includes federal, state and provincial wildlife agencies, individuals, and nonprofit conservation organizations.

Also, as with PIF and other migratory bird plans, NAWCP includes a goal to establish conservation action and exchange information and expertise with other bird conservation initiatives, especially NABCI and the habitat joint ventures established by the NAWMP, including IWJV. The plan also calls for establishment of Practical Units for Planning (PUPs) for terrestrial habitats; Western Montana falls within the Intermountain West Region PUP.

Volume One of the NAWCP plan (Kushlan et al. 2002) covers 165 species of colonial-nesting birds, as well as three grebes that nest semi-colonially. Volume Two will cover 44 species of marsh birds. On October 23, 2001 a second draft of Volume One was released for review. In this draft plan, the conservation status of all North American waterbird species was evaluated, adapting the protocol from PIF and the USSCP. Under this classification system, a number of species found in Montana as breeders or migrants fall into the Species of Moderate Concern or Species of Low Concern categories for North America, Northern Hemisphere, Western

Hemisphere, and Cosmopolitan (world-wide) including the American white pelican, California gull, white-faced ibis, western grebe, and Clark's Grebe. A number of other species, including the Double-crested Cormorant and Great Blue Heron are found in Montana but are classified as Species Not at Risk in North America. The status of these species in Montana may of course be more or less threatened than their global, hemispheric, or continental status. Several species belonging to this group, for example, such as the Double-crested Cormorant and Caspian Tern, are receiving increased attention by state and federal wildlife management agencies because of their potential conflicts with stocks of migrating salmon and steelhead smolt. Similar concerns have not yet become a primary conservation issue in Montana.

The process for developing a regional waterbird conservation plan for the Intermountain West/Southwest Desert PUP was initiated in December 2001 (Ivey 2003). When this regional plan is completed in early 2005 it will articulate conservation and management goals and objectives for waterbirds in Montana and other states of the IWJV, as well as identify and describe habitats and locations of important waterbird habitat in Montana and other Western states. As expected, this regional plan re-defined the status of some waterbird species relative to the National Plan. It is expected to be the primary source of information for waterbird species and habitat objectives for this Coordinated Implementation Plan for Bird Conservation in Western Montana. The draft plan identifies 15 species of High or Moderate Concern for BCR 10 (Table 5).

Table 5 – Waterbird Species of Moderate or High Concern: BCR10

Species:	Concern Level:
Common Loon	Moderate
Eared Grebe	Moderate
Western Grebe	Moderate
American White Pelican	High
American Bittern	Moderate
Great Blue Heron	Moderate
Snowy Egret	Moderate
Black-crowned Night-Heron	Moderate
White-faced Ibis	Moderate
Sandhill Crane	High
Franklin's Gull	High
Caspian Tern	Moderate
Common Tern	Moderate
Forster's Tern	High
Black Tern	High

5. Other Bird Conservation Programs:

In addition to the four migratory bird initiatives described above, there are a number of other important bird conservation programs in Montana that will play a role in the delivery of coordinated bird conservation in BCR10 and elsewhere in the state. These include:

Important Bird Areas (IBA) Program: The IBA Program is an international, site-based approach to bird conservation that began in Europe in the mid-1980s, when BirdLife International sponsored a continent-wide inventory of key sites for birds. The effort spread to the United States in the mid-1990s, under the leadership of the American Bird Conservancy (ABC), who eventually published a book describing the “500 most important bird areas in the United States” (Chiple et al. 2003). ABC and National Audubon Society also completed a pilot project to identify and describe the first state IBAs, in Pennsylvania. As of the summer of 2001, 43 states had IBA programs, including three states that have published guides to their IBAs. The Montana IBA Program was initiated in 1997 as an effort of Montana PIF. In January 2002, the Montana IBA Committee voted to identify 26 IBAs from among nearly 60 sites submitted during the first round of nominations. It is anticipated that a revised list and description of state IBAs will be published by Montana Audubon by the end of 2005. ABC has already recognized Glacier National Park, Freezeout Lake WMA, Red Rock Lakes NWR and Yellowstone National Park as IBAs of global significance in Western Montana.

The IBA program recognizes that there are places on the landscape that provide exceptionally valuable or essential habitat for one or more species of birds, including breeding, wintering or migratory habitat. Identifying, recognizing, monitoring, and stewarding these sites can form the basis of a landscape-level conservation network, not just for birds but also for other species of wildlife. The Montana IBA Program will be an important component coordinated bird conservation in Montana.

Ecoregional Conservation Planning: The Nature Conservancy (TNC) has adopted ecoregion-based planning as the most effective way to achieve its national mission of preserving a diversity of plants, animals, and natural communities. The planning process used by TNC follows a method that defines a vision of conservation success at an ecoregional scale, and is based on documenting and mapping a list or “portfolio” of biologically outstanding sites that represent a full complement of ecosystems, natural communities, and species characteristics of the ecoregion. This method may be used to direct TNC programs and influence other conservation efforts across the United States. The ecoregional plans are based on amended ecoregional units delineated by Bailey et al (1998), and approximate but do not necessarily match the BCR boundaries shown in **Figure 1**.

Western Montana falls within the “Middle Rockies” and “Canadian Rockies” Ecoregions as defined by TNC and the Nature Conservancy of Canada (NCC). The state TNC office in Helena has assumed lead responsibility for the ecoregional plans covering Montana.

Although TNC’s ecoregional plans are not specifically designed as bird conservation plans, they do include identification and classification of those habitat types, areas, and sites that provide important habitat for birds. Birds identified as conservation targets for the ecoregions in Montana are the only birds listed for the portfolio sites in those ecoregional plans. Target Bird Species, listed by TNC for each ecological system group, were obtained from the literature and interviews with acknowledged experts. Because there was close coordination with the BCR 10 Coordinator and Montana PIF priorities, the Canadian Rockies plan addresses many of the same priority bird species considered by other conservation plans. These target species are listed in **Appendix A**.

Range-wide Sage Grouse Conservation Project: The Western Association of Fish and Wildlife Agencies (WAFWA) signed a Memorandum of Understanding in 2000 with the U.S. Fish and Wildlife Service, Forest Service and Bureau of Land Management to develop a strategy for the conservation of sage grouse throughout its range. In 2001 WAFWA received a federal grant to aid sage brush/sage grouse conservation efforts in six or seven Western states, including Montana, as well as British Columbia. In 2002 a project coordinator was hired with the grant funds and he began coordinating the completion of statewide and province-wide sage grouse databases, including medium-to-fine-scale distribution maps of sage grouse habitat. The project was overseen by a federal-state National Sage Grouse Conservation Framework Team, and the Montana plan was released in 2004 (Montana Sage Grouse Working Group 2004).

Endangered Species Act, Birds of Conservation Concern: The Federal Endangered Species Act (ESA) of 1973, as amended, mandates the protection of threatened and endangered species of plants and animals and the development of a recovery plan for each species. In Montana there are a small number of birds listed by the USFWS as Endangered (e.g. Piping Plover), Threatened (e.g. Bald Eagle), Proposed Threatened (e.g. Mountain Plover) or Candidate (e.g. Yellow-billed Cuckoo) species under the ESA. Due to their legal status under the ESA, these species are automatically included in any list of priority bird species for the IWJV in Montana, even though independent measures are being taken under the ESA to recover their populations. The USFWS has also released (in December 2002) a “Birds of Conservation Concern” list for each BCR and USFWS Region. These lists represent those species of “...nongame birds that, without additional conservation actions, are likely to become candidates for listing under the (ESA)”, and the lists were drawn in part from the conservation plans of the bird initiatives listed above. These BCC lists will also serve to guide MOUs between the USFWS and other federal agencies relative to the effect of actions under the Migratory Bird Treaty Act. Birds listed for BCR 10 that occur in Montana are shown in **Table Six**; not all (e.g. White-headed Woodpecker, Snowy Plover) occur regularly in the portion of Montana covered by this plan.

6. Priority Bird Species in Montana

All of the conservation planning programs described above have developed or will develop, as part of their overall planning process, a list of priority bird species, species of concern, or target species, either for Montana, BCR 10, combined BCRs including 10, or for the Intermountain West region. The State of Montana has its own endangered, threatened, and species of concern list which applies statewide, and is updated regularly by the Montana Natural History Program (MNHP). Individual partner agencies such as the BLM and USFS have their own lists of Sensitive Species which apply solely to their own programs. **Appendix A** is a combined list of priority bird species from the primary bird conservation initiatives and from the state special concern list. Individual agency lists are not included, but will be considered by partners in the development of programs and projects.

Table 6 - Threatened, Endangered and Birds of Conservation Concern for Montana and BCR 10

Species, Status*	
American Golden-Plover: BCC	Piping Plover: T
Bald Eagle: T	Prairie Falcon: BCC
Black Swift: BCC	Pygmy Nuthatch: BCC
Brewer's Sparrow: BCC	Red-naped Sapsucker: BCC
Eskimo Curlew: E (extinct?)	Sanderling: BCC
Ferruginous Hawk: BCC	Snowy Plover: BCC
Flammulated Owl: BCC	Solitary Sandpiper: BCC
Golden Eagle: BCC	Swainson's Hawk: BCC
(Interior) Least Tern: E	Upland Sandpiper: BCC
Lewis's Woodpecker: BCC	Whimbrel: BCC
Loggerhead Shrike: BCC	White-headed Woodpecker: BCC
Long-billed Curlew: BCC	Whooping Crane: E
Marbled Godwit: BCC	Williamson's Sapsucker: BCC
McCown's Longspur: BCC	Wilson's Phalarope: BCC
Mountain Plover: PT, BCC	Yellow Rail: BCC
Peregrine Falcon: BCC, de-listed	Yellow-billed Cuckoo: C, BCC

*Status: Endangered; Threatened; Proposed Threatened; Candidate for listing; Birds of Conservation Concern

7. Bird Species-Habitat Relationships

The Montana PIF Bird Conservation Plan (Casey 2000) identified and described 22 habitats (land cover types) within 6 broad classes in Montana (Table Seven), 18 of which provide critical habitat for at least one of the state's Level I or Level II priority species. Montana PIF and the Montana Bird Conservation Partnership updated these eighteen habitats from the Montana BCP, and their associated priority bird species, during 2002. The PIF habitat association matrices have been included and expanded herein (Appendix B) to show the relationship between all priority bird species in Montana and their habitats. These matrices allowed us to consider all conservation plans when selecting our Bird Habitat Conservation Areas.

8. Priority Habitat Types

In December 2002 the Montana Bird Conservation Partnership met in Helena and ranked the 22 major habitat types defined by the Montana PIF Bird Conservation Plan (Casey 2000), plus Agricultural Lands, into three categories of priority, A, B and C (**Table 8**), defined below. Three criteria were used to rank these habitat types: 1) Statewide importance to birds; 2) Degree of threat; and 3) Opportunities (funding, partnerships, and feasibility for habitat protection, restoration and enhancement). The three categories were defined as:

- Priority A: High threat, high opportunity, and high value to birds statewide.
- Priority B: One criterion may be high, but generally the habitat is of moderate concern.
- Priority C: Relatively low threat, low opportunity, low value as habitat statewide.

Table 7 - Montana Habitat (Land Cover) Types in the Montana PIF Plan

Grassland:

Mixed Prairie (Short- and mid-grass)
Intermountain (Parkland, Palouse Prairie, Western Valleys)

Shrubland:

Sagebrush Steppe
Mountain Shrubland

Forest:

Dry Forest (Ponderosa Pine, Douglas-fir)
Mixed Mesic Forest (fir-larch)
Cedar/ Hemlock
Burned (Stand-replacement, standing dead)
Whitebark Pine
Aspen
Juniper/Limber Pine
Wet Subalpine Fir
Dry Subalpine Fir/Lodgepole Pine

Riparian:

Deciduous (Cottonwood)
Coniferous (spruce, e.g.)
Riparian Shrubland
Hardwood Draws (Green Ash, Box Elder)

Wetland:

Prairie Potholes
Intermountain (Lakes and Marshes)
Reservoirs, <640 ac
Reservoirs, >640 ac

Unique: (Rock, Urban, Agriculture)

Table 8 - Ranked List of Habitat Types for Western Montana

Priority A	Priority B	Priority C:
Grassland	Cedar/Hemlock Forest	Mountain Shrubland
Sagebrush Steppe	Whitebark Pine	Wet Subalpine Fir
Dry Forest	Mixed Mesic Forest	Dry Subalpine
Burned Forest	Juniper/Limber Pine	Fir/Lodgepole Pine
Aspen	Coniferous Riparian	Urban, Rock, Alpine
Riparian Deciduous Forest	(Herbaceous Riparian)	
Riparian Shrubland	Agricultural	
Wetlands		

9. Bird Habitat Conservation Areas

In April, 2003 an all-day planning workshop was held in Missoula to develop a list of 25-35 priority Bird Habitat Conservation Areas (BHCAs) in Montana which should be considered by the Intermountain West Joint Venture for all-bird conservation projects over the next five to seven years. Existing plans and resource conservation maps were consulted, including the Wetland Focus Areas already delineated by the Montana Steering Committee, the IBA Map for Montana, and the various maps for Montana developed by TNC during their ecoregional planning processes. From this all-day exercise, involving bird conservation experts from all over Montana, a map of 26 potential BHCAs in BCR 10 was developed. These 26 areas were discussed and debated to ensure that they were not only important on their own, but that they adequately reflected the range of priority A and B habitats.

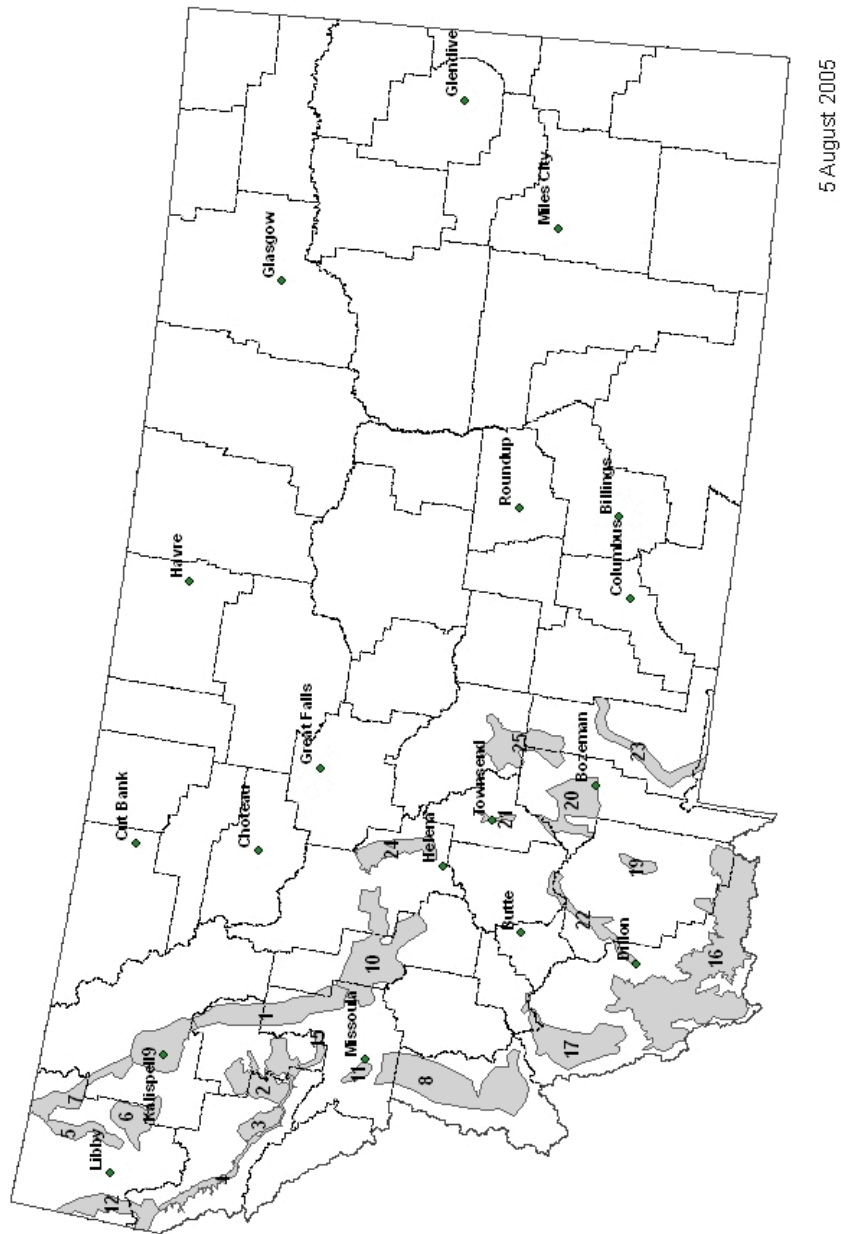
As of March 2004, the Montana IWJV Steering Committee had reviewed this list and maps of the proposed BHCAs, and derived a second draft designation of 24 BHCAs in western Montana; one more was added in November 2004, for a final list of 25 BHCAs, 22 of which are in the IWJV (**Table 9**). The final areas selected (**Figure 3**) were in some cases aggregations of the original draft areas; in other cases the lines were redrawn to better capture conservation opportunities based on habitat or land ownership patterns. Detailed BHCA maps are available on request from ABC (dcasey@abcbirds.org), and on the IWJV website (<http://iwjv.org>).

It must be understood that Bird Habitat Conservation Areas are intended to display areas where bird habitat conservation projects may take place, where state partners believe the best opportunity exists for effective conservation activities. However, the BHCAs have no official status. In the case of all of these units (private or public) BHCA designation simply notes where conservation activities could occur. Such action would, of course, be predicated on concurrence, collaboration and cooperation with all landowners involved.

Table 9 - Bird Habitat Conservation Areas (BHCAs) for Western Montana

#	BHCA Name	Priority Habitats	#	BHCA Name	Priority Habitats
1	Swan Valley	wetland, riparian, cedar	12	Bull River / Lower Kootenai	riparian, wetland, cedar
2	Mission Valley	wetland, riparian, dry forest, burned	15	Jocko River	riparian
3	Clear Creek / Plains	dry forest, burned	16	Centennial / Beaverhead	sagebrush, aspen, wetland shrub, riparian, whitebark pine
4	Lower Clark Fork	riparian	17	Upper Bighole	sagebrush, shrub riparian, aspen, wetlands
5	Koocanusa East Hills	dry forest	19	Ennis	riparian, wetland
6	Wolf Creek / Pleasant Valley	dry forest	20	Three Forks / Gallatin	riparian
7	Tobacco Valley / Stillwater River	grassland, dry forest, riparian, wetland, spruce	21	Townsend	riparian, wetland
8	Bitterroot Valley	dry forest, riparian, wetland, burned	22	Jefferson / Whitehall	riparian, grassland
9	Flathead Valley	wetland, riparian, agricultural	23	Yellowstone River	riparian
10	Blackfoot Valley / Ovando	grassland, wetland, riparian, sagebrush	24	Gates of the Mountains	dry forest, grassland
11	Clark Fork / Grass Valley	riparian, grassland	25	Wilsall Valley	sagebrush, grassland

Figure 3 – Bird Habitat Conservation Areas (BHCAs) for Western Montana



10. Landscape Mapping

ABC conducted digitization and landscape mapping within BHCAs under a contract with the IWJV, using Montana Gap data and ownership layers. Calculation of habitat acreages by ownership category within each BHCA formed the basis for framing habitat goals and objectives. Although the Montana Gap layer has some known inaccuracies (e.g. a tendency to over-classify sagebrush steppe habitat as grassland), it was adopted as the most comprehensive habitat classification tool currently available to provide outputs for planning. We reclassified Gap types into the habitat categories identified by Montana PIF (**Appendix C**) prior to our calculations. Detailed breakdowns of cover type by ownership for individual BHCAs are available on request from the joint venture.

11. Western Montana BHCA Descriptions

- **Swan Valley (1):** This BHCA covers 412,443 ac in the Swan River Valley. Priority habitats and bird species for conservation here include wetland (>8000 ac; Common Loon, Ring-necked Duck, Black Tern), riparian (>10,000 ac; American Dipper, Red-eyed Vireo) and cedar/hemlock forest (>4,000 ac; Vaux's Swift). Primary potential partners include the U.S. Forest Service (>185,000 ac), private landowners (~170,000 ac), and the Montana Dept. of Natural Resources Conservation (DNRC, 48,866 ac). The Montana Land Reliance has been active setting up conservation easements in the area, which also includes the Swan River NWR.
- **Mission Valley (2):** This BHCA covers 329,613 ac of the lower Flathead River valley south of Flathead Lake, and was selected for conservation of the following focal habitats and bird species: wetlands (>6,000 ac; Redhead, Wilson's Phalarope); riparian (~3,000 ac; Willow Flycatcher, Northern Rough-winged Swallow); dry forest (7,976 ac; Flammulated Owl); and burned forest (recent fires, no acreage available; Lewis' and Black-backed Woodpeckers). Private lands (117,854 ac) and Tribal lands within the Flathead Reservation (115,600 ac) dominate the landscape, which also includes >10,000 ac of state Wildlife Management Areas (WMAs), >3000 ac of Tribal WMAs, and >20,000 ac of National Wildlife Refuge land (e.g. Ninepipe NWR). The Confederated Salish and Kootenai Tribes (CSKT) have an active riparian and wetland habitat conservation program.
- **Clear Creek/Plains (3):** This BHCA covers 99,889 ac north of the Clark Fork River near the town of Plains. It was selected by the Montana Bird Conservation Partnership as a focal area for dry forest (25,171 ac; Blue Grouse, Cassin's Finch) and burned forest conservation, but also includes almost 9,000 ac of grassland (Long-billed Curlew). Nearly 75% of the land ownership is private (>52,000 ac) or Tribal (20,714 ac).
- **Lower Clark Fork (4):** Covering 132,092 ac along the Flathead and Clark Fork Rivers from the Jocko River to the Bull River, this area was selected primarily for riparian habitat conservation. There are >8,250 ac of mapped riparian habitats and >13,000 ac of riverine, open water habitat in the BHCA (Wood Duck, Vaux's Swift), which also includes >17,500 ac of grassland (Bobolink) and >29,000 ac of dry forest

(Lewis's Woodpecker). Private lands dominate (87,534 ac), with >16,000 ac of USFS and >10,000 ac of tribal lands included in the area. Most (>5,700 ac) of the riparian habitat is on private land.

- **Koocanusa East Hills (5):** Most (90%) of this BHCA along the slopes above the east shore of Lake Koocanusa in Lincoln County is on Kootenai National Forest (KNF) land. Dry forest (14,109 ac) was the primary habitat targeted by the selection of this BHCA (Flammulated Owl, Blue Grouse), but mixed mesic forest (>46,000 ac, Hammond's Flycatcher, Olive-sided Flycatcher) and aspen (5,680 ac, Red-naped Sapsucker) are also well-represented. The KNF has been active in pine forest restoration, working in partnership with MFWP and their Wildlife Mitigation Program. Local point count data are available from both MFWP and the USFS landbird program.
- **Wolf Creek/Pleasant Valley (6):** This 173,488-ac BHCA between Kalispell and Libby was selected because of the extensive stands of dry (ponderosa pine) forest (33,056 ac; Northern Goshawk, Cassin's Finch), but also includes >20,000 ac of grassland (Long-billed Curlew) and diverse (but unmapped) wetlands (Sandhill Crane, Lesser Scaup) on USFWS ownership (Lost Trail NWR). Private land ownership here (>100,000 ac) is primarily Plum Creek Timber land; they have been active in land trades, sales, and the establishment of conservation easements along the Thompson and Fisher Rivers (with MFWP). Most of this BHCA is in the IWJV.
- **Tobacco Valley/Stillwater River (7):** This BHCA covers 206,723 ac spanning both the PPJV and IWJV in Flathead and Lincoln Counties between Whitefish and Eureka. It was selected for riparian (3,807 ac; Barrow's Goldeneye, Willow Flycatcher), grassland (26,200 ac; Columbian Sharp-tailed Grouse, Grasshopper Sparrow), dry forest (30,978 ac; Pygmy Nuthatch), wetland (~4,000 ac; Common Loon) and spruce-fir (2,688 ac; Olive-sided Flycatcher) habitats. The Montana Land Reliance (MLR) and TNC have been active in the conservation of private lands in this area, particularly in the Palouse prairie grassland areas near Eureka. The area is just over 50% private land, with an additional 60,797 ac of USFS land and >35,000 ac of the Stillwater State Forest.
- **Bitterroot Valley (8):** Because of the profuse development occurring in this 704,051-ac BHCA, many conservation partnerships have been formed. Active partners include the Five Valleys and Bitterroot Land Trusts, Rocky Mountain Elk Foundation, MFWP, and the MLR. Dry forest (95,964 ac; Flammulated Owl), riparian (>16,000 ac; Lewis's Woodpecker), wetland (~1,000 ac; Wood Duck) and burned forest (thousands of ac from recent fires; Williamson's Sapsucker) are the focal habitats for this BHCA. Most of the BHCA (>403,000 ac) is privately owned, with the USFS being the primary public land ownership category (256,591 ac).
- **Flathead Valley (9):** Covering 292,515 ac of the Flathead River Valley north of Flathead Lake, this area near Kalispell is another of the fastest-growing areas of Montana. But nearly 20,000 ac of riparian habitat (Vaux's Swift, Veery, Red-eyed Vireo) occurs in the BHCA, and >9,000 ac of riverine and open water (slough) wetland habitats (Lesser Scaup). Conservation activities here, led by MFWP and the Flathead Valley Land

Trust, are focused on these sloughs and on the surrounding agricultural lands (>60,000 ac), which is rapidly being lost to residential development.

- **Blackfoot Valley/Ovando (10):** The Ovando area, including the Blackfoot River and its tributaries, has been the site of some of greatest conservation success stories in Montana. The Blackfoot Challenge is a diverse partnership of private landowners, USFWS, MFWP, TNC and other government and non-governmental partners that have put into place a wide variety of conservation easements, land trades, purchases and donations, and management agreements to protect and enhance wetland, grassland, riparian and sagebrush habitats in the valley. The 583,600-ac BHCA was identified as a focal area for these habitats, and includes >196,000 ac of grassland (Long-billed Curlew), >27,000 ac of riparian habitats (Cordilleran Flycatcher), >2,000 ac of wetlands (Black Tern, Western Grebe), and >4,000 ac of sagebrush shrubland (Brewer's Sparrow).
- **Clark Fork/Grass Valley (11):** Located along the Clark Fork River just downstream of Missoula, this area is recently receiving conservation from both the Five Valleys Land Trust and Montana Audubon. The BHCA covers 40,834 ac, consisting almost entirely of private lands, with the primary priority habitats being grassland (13,991 ac; Bobolink) and riparian (1,630 ac; Lewis's Woodpecker).
- **Bull River/Lower Kootenai (12):** This BHCA near the Idaho border spans is partially in the IWJV, and covers a total of 209,526 ac. It was selected for riparian (7,181 ac; Willow Flycatcher), wetland (>3,000 ac; Barrow's Goldeneye) and cedar/hemlock forest (17,456 ac; Hammond's Flycatcher, Brown Creeper) habitats. More than 128,000 ac of the area is in USFS ownership, but MFWP and land trusts have been working to conserve the >73,000 ac of private lands, including more than half the riparian and wetland acres in the BHCA.
- **Jocko River (15):** Another BHCA consisting almost entirely of Tribal and private lands, this riparian focal area covers 41,244 ac south of the National Bison Range near Arlee. It includes over 1,300ac of mapped riparian habitats (Wood Duck, Calliope Hummingbird, Lazuli Bunting), as well as >6,000 ac of grassland (Grasshopper Sparrow) and 4,850 ac of dry forest habitat (Blue Grouse). The CSKT are focusing both fisheries and wildlife conservation efforts on this drainage.
- **Centennial/Beaverhead (16):** This >1.4 million ac BHCA includes the largest contiguous stands of sagebrush habitat in Montana, with more than 700,000 ac of this high-priority habitat. Sage Grouse, Sage Thrasher, Brewer's Sparrows and the only known population of Sage Sparrows in Montana all occur here. Most of the sagebrush habitat in the BHCA is on BLM, private, and State land. Other priority habitats here include 20,934 ac of aspen (Ruffed Grouse, Great Gray Owl, Mountain Bluebird); 31,564 ac of riparian (willow) shrubland (Sandhill Crane, Willow Flycatcher); and many quality wetlands (Eared Grebe, Redhead, Peregrine Falcon, Wilson's Phalarope), including Red Rock Lakes NWR. It is the single most important nesting area for Trumpeter Swans in the state, and also includes known colonies of Franklin's Gulls, Black Terns, and White-faced Ibis. This BHCA has been the focus of a series of successful NAWCA grants facilitated by the IWJV.

- **Upper Bighole (17):** This BHCA totals just over 400,000 ac in size, and >74% of it is private lands. Priority habitats here are much the same as in BHCA 16, with sagebrush (Brewer's Sparrow) and agricultural lands (Sandhill Crane, Mallard) bordering extensive stands (>17,000 ac) of riparian shrubland (Rufous Hummingbird). Key private parcels in this BHCA were one focus of the Beaverhead III NAWCA project. Like the Centennial Valley, development pressure is mounting here, but has not yet reached the level of some other Montana valleys. The potential to protect and enhance large landscapes with a mosaic of priority habitats still exists, and is enhanced by the opportunity to include partners interested in maintaining and protecting the state's only population of adfluvial arctic grayling, in the Bighole River.
- **Ennis (19):** Centered on the Madison River where it enters Ennis Lake, this BHCA is one of the smaller ones (53,249 ac) selected by the steering committee. Riparian and wetland habitats (Bald Eagle, Barrow's Goldeneye, Warbling Vireo) are the focus of this BHCA, with highly braided river channels and sloughs entering a lake which is one of the most important staging areas for Common Loons, Sandhill Cranes, and Trumpeter Swans in Montana. The BHCA is almost wholly private lands. The lake has been nominated as an IBA by Montana Audubon, who has been conducting riparian surveys and annual loon staging surveys here. PPL Montana, which has made money available for riparian habitat enhancement efforts on the Madison/Missouri system, is also a primary potential partner for conservation efforts in this BHCA.
- **Three Forks/Gallatin (20):** The Gallatin Valley Land Trust is working on developing a NAWCA partnership in this 293,000 ac BHCA, selected to emphasize riparian habitat (>14,000 ac). There have been active efforts to prioritize riparian conservation opportunities in the Gallatin Valley (supported in part by research at MSU), where residential development is progressing at perhaps the fastest pace in the state. Much of the opportunity for conservation here will lie in working to maintain or restore grassland (>77,000) and agricultural habitats (>171,000 ac) adjacent to riparian areas before they are converted to other uses. Priority species in this area include Mallard, Long-billed Curlew, Sandhill Crane, Bald Eagle, Northern Rough-winged Swallow, Willow Flycatcher and Red-eyed Vireo.
- **Townsend (21):** Another BHCA that includes primarily riparian and wetland habitats, in this case where the Missouri River enters Canyon Ferry Reservoir, this 19,769 ac area is focused on the Canyon Ferry WMA. The area is identified as an IBA by Montana Audubon, who joins MFWP and PPL Montana as the primary conservation partners in the area. One of only 4 colonies of American White Pelicans in the state is located here, and the area is an important breeding area for Western Grebes, a variety of waterfowl, and terns. The area is heavily used by migrant shorebirds, and riparian habitats (>2,000 ac) support such priority species as Western Screech-owl and Least Flycatcher.
- **Jefferson/Whitehall (22):** Grassland (87,304) and riparian habitats (>18,000 ac) are the primary focus of this 141,255-ac BHCA. More than 90% of the area is private land; this includes >10,000 ac owned by the Placer Dome mining company.

- **Yellowstone River (23):** From its near its headwaters in Wyoming to Pompey's Pillar downstream of Billings, this 591,666-ac BHCA was selected to include the entire BCR 10 portion and some of the BCR17 portion of one of Montana's premiere riparian corridors. The Yellowstone is free-flowing for this entire reach, and is bordered primarily by private lands. The nearly 50,000 ac of mapped riparian habitats here support one of the highest densities of nesting Bald Eagles in the state, and the cottonwood gallery forests are also home to the Wood Duck, Swainson's Hawk, Black-billed and Yellow-billed Cuckoo, Eastern and Western Screech-owl, Vaux's Swift, Least and Willow Flycatcher, Veery, American Redstart, Lazuli Bunting and a wide variety of migrants. Most of the land in this corridor is privately owned.
- **Gates of the Mountains (24):** Selected for opportunities in dry forest (31,767 ac; Cassin's Finch) and grassland (43,778 ac; Golden Eagle), this 124,214-ac BHCA between Helena and Great Falls includes a diverse mix of USFS, BLM, state and private ownership. It also includes >2,500 ac of riparian habitats (Bald Eagle, Northern Rough-winged Swallow).
- **Wilsall Valley (25):** This 313,072-ac BHCA was selected primarily as a sagebrush conservation area (Greater Sage-Grouse, Brewer's Sparrow) and is nearly 2/3 sagebrush and grassland habitat. The vast majority of the BHCA (>290,000 ac) is private ranch land managed for livestock production. Montana Fish, Wildlife and Parks is likely to be the lead agency on conservation efforts in this BHCA.

12. Habitat Conservation Goals and Objectives

Once mapping was completed for Habitat Conservation Areas in BCR 10, the Montana Bird Conservation Partnership met again in November 2004 to establish directional goals and measurable habitat objectives for the Priority A and B bird habitats shown in **Table 8**. These directional goals and measurable objectives will be articulated in a future iteration of **Table 8**. In establishing these goals and objectives, the steering committee consulted existing maps, habitat acreages within BHCAs (**Appendix D**) and within BCR10 in Montana (**Appendix E**) and the goals and objectives in existing bird plans. In certain cases where mapping definition or logic demanded it, goals and objectives were derived for recombined habitats. Examples include Grassland (both Intermountain and Mixed Prairie) and Wetlands (several types).

The Montana Bird Conservation Partnership, in their role as the state steering committee for the Intermountain West Joint Venture, has identified 10,137,699 ac in 25 BHCAs as the priority geography of joint venture conservation delivery in BCR 10 in Montana. This represents >25% of the nearly 39 million ac of BCR 10 in the state. While the habitat acres within the BHCAs are considered the highest priority areas for conservation over the next 10 years, there are certainly additional conservation opportunities in the remainder of the landscape that individual partners will pursue. Indeed, it is important the best management practices are adopted for all priority habitats wherever they occur. The BHCAs represent those areas where the joint ventures feel the best opportunities exist for partnerships designed to meet coordinated conservation goals for priority species and habitats. The following narrative identifies directional goals, measurable objectives and examples of specific opportunities for priority (A) and (B) habitats in the BHCAs

(see also the previous BHCA descriptions). Directional objectives (increase, maintain) for priority species are directly from the conservation plans of the bird initiatives

I. Priority A Habitats

GRASSLAND

Although the Montana BCP (Casey 2000) treated Intermountain and Mixed Prairie Grasslands as separate types, we have lumped them here, since all native grassland in BCR10 in Montana is a priority for conservation. Species associations do differ east and west of the divide as shown.

Priority Species (all grassland): Mallard (incr); Northern Pintail (incr); American Wigeon (incr); Lesser Scaup (incr); Ferruginous Hawk (main); Golden Eagle (main); Prairie Falcon (main); Long-billed Curlew (incr); Wilson's Phalarope (incr); Bobolink (main/incr)

(Intermountain only): Columbian Sharp-tailed Grouse (main/incr)

(Mixed Grass Prairie only): Mountain Plover (incr); Upland Sandpiper (main); Marbled Godwit (incr); Burrowing Owl (main); Loggerhead Shrike (main); Sprague's Pipit (incr 100%); Lark Bunting (main); Baird's Sparrow (incr 100%); McCown's Longspur (main/incr); Chestnut-collared Longspur (main)

Directional Goal: Manage for no net loss of grassland in Montana from 2005-2015. Provide large blocks of grassland in a diverse mosaic of habitats across the planning area. Maintain existing tracts of native grassland wherever they occur. Use restoration to expand the size of habitat blocks wherever feasible, particularly on highly erodible soils. Work toward doubling the amount of effective habitat (occupied and productive) for Sprague's Pipit and Baird's Sparrow where they occur along the Rocky Mountain Front.

Measurable Objectives: Protect/enhance/restore 1.5 million ac of grassland (24%) in the IWJV in Montana. Emphasize the 448,626 ac in the 6 BHCAs targeted for grassland conservation.

Threats: Conversion to agriculture, mismanagement of livestock grazing, invasion by exotics and residential development all threaten grasslands in western Montana.

Desired Future Condition(s): Control invasion by noxious weeds. Minimize/eliminate encroachment by woody vegetation. Reestablish fire regime, and manage grazing to maintain appropriate species composition, vertical and horizontal structure for priority species.

Occurrence in IWJV: 6,315,221ac (BCR10: 6,271,579; BCR17: 43,642)

Total in BHCAs (% of IWJV total): 1,543,395 ac (24%)

Individual BHCA Opportunities and Strategies: Six BHCAs were selected with this habitat as a primary focus (#7,10,11,22,24,25). These targeted BHCAs total 448,626 ac of grassland habitat. Many of these acres are interspersed with sagebrush steppe; indeed the Montana Gap layer tends to misrepresent sagebrush as grassland. In fact, one BHCA targeting sagebrush (#16) has >350,000 ac of grassland. As with any habitat type, eventual conservation design within BHCAs will depend on the best available local habitat information. (The two largest original grassland BHCA's along the Rocky Mountain Front (13, 14) are currently a

conservation focus for both TNC and the Partners for Wildlife Program of the USFWS, and fall within the Prairie Pothole Joint Venture).

SAGEBRUSH STEPPE

Priority Species: Ferruginous Hawk (main); Greater Sage-Grouse (incr 100%); Sage Thrasher (main); Brewer's Sparrow (incr 100%)

Directional Goal: Double the acreage of effective habitat for Greater Sage Grouse within its historic range in the state, and for the Brewer's Sparrow within its range. Over time, maintain at least 50% of existing sagebrush in stands 30 yr of age or older.

Measurable Objectives: Protect/restore/enhance 1.02 million ac (48%) of sagebrush steppe in the IWJV portion of MT during the period 2005-2015. Emphasize the 905,319 ac in the four BHCAs chosen to target this habitat. Maintain sagebrush communities with diverse habitat structure, especially mature stands of sagebrush, throughout the known range of priority species in the planning area. Restore sagebrush communities within the historic range of Greater Sage-grouse. Minimize the continued fragmentation of the largest existing blocks of sagebrush habitat.

Threats: Habitat conversion (to agriculture and residential development), invasion by exotics, mismanagement of livestock grazing, and encroachment by conifers (primarily juniper) have all contributed to the decrease in quantity and quality of sagebrush habitats in western Montana. More recently, the development of coal bed methane and wind power sites threaten to further fragment sagebrush stands.

Desired Future Condition(s): Manage for diverse herbaceous understory, with at least 40% forbs. Manage sagebrush communities around leks to provide 15-25% canopy of sagebrush. Manage grazing to allow no more than 35% herbaceous utilization by weight. Sagebrush shrubs should be at least 50 cm in height with high foliage density and branches within 30 cm of the ground. Maintain a variety of both horizontal and vertical structure in managed sagebrush stands. The Montana Sage Grouse Management Plan (Montana Sage Grouse Working Group 2004) includes specific management recommendations for this habitat.

Occurrence in IWJV: 2,141,959 ac (BCR10: 2,138,744 ac; BCR17: 3,184 ac)

Total in BHCAs (% of IWJV total): 1,022, 760 ac (48%)

Individual BHCA Opportunities and Strategies: Four BHCAs were selected with this habitat as a primary focus (#10, 16, 17), and these total 905,319 ac of sagebrush habitats. Partners in three of these areas, the Centennial/Beaverhead, Upper Bighole, and Blackfoot Valley/Ovando BHCAs, have received NAWCA grants that include tangible benefits to sagebrush conservation. The Wilsall Valley was included as a BHCA because of targeted efforts there (by MFWP) to improve Greater Sage-Grouse habitats on private lands.

DRY FOREST

Priority Species: Northern Goshawk (main); Blue Grouse (incr 100%); Flammulated Owl (main/incr); Lewis's Woodpecker (main/incr); Cassin's Finch (main)

Directional Goal: Manage for the long-term maintenance of 25% of dry forest habitats (by 4th order watershed) as old growth, based on mean values of regional old-growth characteristics. Work to double the acreage of effective habitat for Blue Grouse in dry forest habitat in western Montana.

Threats: The most significant threat to mature dry forest habitats is the development of dense understory regeneration in areas where fire has been suppressed. This has made these stands much more susceptible to stand-replacing fires. The overharvest of large trees and conversion of stands to agricultural and residential uses have also contributed to the loss of suitable habitat for priority species in this type.

Measurable Objectives: Manage 392,514 ac (22%) of dry forest habitat in the IWJV portion of Montana toward old growth condition by 2015, while maintaining a diversity of conditions as described below. Emphasize the 245,243 ac in the seven BHCAs selected to target this habitat. Retain all stands that meet regional old-growth characteristics. Restore historic structural characteristics with no elimination of large trees or snags.

Desired Future Condition(s): Fifty percent of old growth stands should meet or exceed mean values for old growth elements (>215 yr old trees; >17 trees/ac >21 in. dbh; > 6 snags/ac >9 in. dbh). Restore the role of fire to reduce understory encroachment. Retain all trees >17 in. dbh, all snags >9 in. dbh. Manage for single- and double-storied stands with open conditions (<50% cover) in dry forests of all age classes. Manage for a variety of conditions at the landscape level, particularly for heterogeneous understory conditions, to meet the needs of Flammulated Owl and Lewis's Woodpecker.

Occurrence in IWJV: 1,772,985 ac (BCR10: 1,772,106; BCR17: 879)

Total in BHCAs (% of IWJV total): 392,514 ac (22%)

Individual BHCA Opportunities and Strategies: Seven BHCAs were selected with this habitat as a primary focus (#2,3,5,6,7,8,24), with a total of 245,243 ac of dry forest habitat. The American Bird Conservancy, Bitterroot Land Trust, National Forest Foundation and other partners are currently working on a private lands ponderosa pine conservation project in the Bitterroot Valley BHCA, and on decision support tools for pine conservation elsewhere in western Montana. The Kootenai National Forest has conducted extensive ecosystem restoration logging in the Koocanusa East Hills BHCA. The USFS will be a major partner in conservation of this habitat throughout western Montana.

BURNED FOREST

The Montana BCP (Casey 2000) identified standing burned forests as a priority habitat for many landbird species, and recommended that 1-2% of the forested landscape should be in a recent (< 8 yr post-fire) condition to meet the needs of these species (e.g. Black-backed Woodpecker). In recent years, notably 2000 and 2003, extensive fires burned in western Montana, and these "objectives" have been met. While MT partners will continue to work together to influence fire

policy, notably salvage logging in burned areas and the restoration of the proper role of fire in the landscape, we did not feel that this conservation issue was easily captured in the context of this implementation plan. No quantitative objectives were developed.

ASPEN

Priority Species: Ruffed Grouse (main); Red-naped Sapsucker (main)

Directional Goal: Double the acreage of aspen wherever it currently occurs.

Measurable Objectives: Restore and enhance 124,192 ac (32%) of the aspen in the IWJV portion of Montana, to double its extent to >250,000 ac by 2015. Maintain 20% of stands in overmature (decadent) condition, while working to achieve equal distribution of age classes within each 4th order watershed.

Threats: Individual aspen stands are highly threatened by a lack of regeneration, generally from fire suppression, and often combined with intense grazing and browsing by livestock and/or elk. In many places, encroachment by conifers has severely reduced acreage of this successional type.

Desired Future Condition(s): Use fire and logging, control grazing to encourage regeneration. Provide for minimum blocks of 40 ac within conifer complexes; regenerate entire clones in aspen/grass, aspen/forb and aspen/shrub complexes.

Occurrence in IWJV: 385,631 ac (BCR10: 384,264; BCR17: 1,367 ac)

Total in BHCAs (% of IWJV total): 124,192 ac (32%)

Individual BHCA Opportunities and Strategies: Only two BHCAs were selected with this habitat as a primary focus (#16, 17); however significant additional opportunity for aspen conservation (94,841 ac) is in found in other BHCAs (1, 6, 7, 9, 10).

RIPARIAN DECIDUOUS FOREST

Riparian habitat conservation opportunity often involves areas where woodland, shrubland and herbaceous/wetland components are present in various combinations. The Montana BCP (Casey 2000) addressed these essentially as structural components of riparian habitats, rather than as unique types. But since the three types (Woodland, Shrubland, Herbaceous) were identifiable (albeit perhaps under-represented) in the Montana Gap layer, we treat them separately here, with the latter treated as a Wetland component. Riparian conservation projects will likely combine objectives from these types.

Priority Species: Wood Duck (incr); Barrow's Goldeneye (main); Bald Eagle (main); Swainson's Hawk (main/incr); Black-billed Cuckoo (main); Yellow-billed Cuckoo (main); Vaux's Swift (main); Lewis's Woodpecker (main/incr); Red-naped Sapsucker (main); Cordilleran Flycatcher (main); Northern Rough-winged Swallow (main); Veery (main); Red-eyed Vireo (main)

Directional Goal: Protect and enhance existing stands with a goal of no net loss of mature riparian deciduous forest.

Measurable Objectives: Protect, restore and/or enhance 93,202 ac (24%) of riparian deciduous forest in the IWJV portion of Montana by 2015, emphasizing the 62,335 ac in 15 BHCAs selected to target this habitat.

Threats: The extent of mature stands of cottonwoods has decreased over time as natural flows have been altered along many MT rivers, reducing regeneration and replacement. In some areas, cottonwoods have been harvested for pulp or cleared for pasture and residential development. Overgrazing can both limit regeneration and drastically alter vegetative structure in this type.

Desired Future Condition(s): Wherever possible, maintain or restore the dynamic nature of floodplains to accommodate all successional stages of cottonwood forest. Manage existing stands to protect mature trees and snags, and to recruit replacements for both. Manage grazing to provide for diverse habitat structure, including a shrub understory. Streambanks in particular should support dense growth of shrubs, forbs and grass.

Occurrence in IWJV: 396,113 ac (BCR10: 392,444; BCR17: 3,669 ac)
Total in BHCAs (% of IWJV total): 93,202 ac (24%)

Individual BHCA Opportunities and Strategies: Fifteen BHCAs were selected with this habitat as a primary focus (#1,2,4,7,8,9,10,11,12,15,19,20,21,22,23). Designation of the Madison-Missouri River system as a Conservation Reserve Enhancement Program area, and the availability of matching funds from PPL Montana, will foster conservation opportunities in the Ennis (19), Three Forks/Gallatin (20), Townsend (21) and Gates of the Mountains (24) BHCAs. ABC is working with land trusts, MLR, NRCS, and Canadian partners to develop a trans-boundary riparian habitat conservation program incorporating BHCAs 1,4,5,7,9, and 12.

RIPARIAN SHRUBLAND (see comments under Riparian Deciduous Forest)

Priority Species: Black-billed Cuckoo (main); Calliope Hummingbird (main/incr); Rufous Hummingbird (incr 100%); Willow Flycatcher (incr 50%); MacGillivray's Warbler (main); Lazuli Bunting (main)

Directional Goal: No net loss of riparian shrubland. Work toward doubling the acreage of effective (occupied and productive) habitat for the Rufous Hummingbird.

Measurable Objectives: Protect, restore and/or enhance 102,976 ac (45%) of riparian shrubland in the IWJV 10 portion of Montana by 2015, emphasizing the 48,787 ac in the two BHCAs selected to target this habitat (16, 17), and in those selected for riparian woodland conservation.

Threats: The primary threat to riparian shrublands is mismanagement of grazing by livestock. Stream channelization, diversion and direct removal of vegetation for pasture, cropland or development are also threats to the quality and quantity of this habitat.

Desired Future Condition(s): Dense shrubland stands should be a component of all riparian conservation areas where they occur naturally, across the entire floodplain. Grazing should be managed so that decadence is kept to a minimum, regeneration is ongoing, and crown heights are

appropriate for the shrub species present. Stands should be multi-layered, with a healthy ground cover layer.

Occurrence in IWJV: 229,430 ac (BCR10: 228,437; BCR17: 993)

Total in BHCAs (% of IWJV total): 102,976 ac (45%)

Individual BHCA Opportunities and Strategies: Riparian (primarily willow) shrubland stands are a major component of the Centennial/Beaverhead (16) and Upper Bighole (17) BHCAs, which have both been NAWCA project areas for TNC, the USFWS, and other partners. These partners are also working on riparian conservation along the Rocky Mountain Front (BHCA 13), where BHCA 14 includes another 19,000 ac of this habitat. All the BHCAs targeted for riparian woodland conservation include opportunities to conserve riparian shrubland as well. Strategies will generally include fencing, replanting, and restoration of flows and channel contours in degraded areas.

WETLANDS

Wetlands have always been, and continue to be, a primary conservation emphasis for the IWJV partners in western Montana. All the primary wetland complexes considered to be of conservation priority in BCR 10 in the state were included in the BHCAs. But because the National Wetlands Inventory is not completed for the state, we had to rely on the Montana Gap layers for acreage calculations. While open water habitats are well represented (and probably overstate wetland acreages), other wetland types are not. The only other category we could use to represent wetland habitat opportunity was Riparian Herbaceous. Project proponents will rely on local data to better define wetland acreage during the development of conservation projects. For the purposes of this plan, we have lumped wetland (including man-made) categories originally outlined in the Montana BCP (Casey 2000) into the following:

Intermountain and Prairie Pothole Wetlands (Wet Meadow, Marsh, Open Water, Playa)

Priority Species: Common Loon (main/incr); Snow Goose (main); Greater White-fronted Goose (main/incr); American Wigeon (incr); Redhead (incr); Canvasback (incr); Greater Scaup (main/incr); Lesser Scaup (incr); Sandhill Crane (incr); American Golden Plover (main); Black-necked Stilt (incr); American Avocet (incr); Solitary Sandpiper (main); Whimbrel (main); Long-billed Curlew (incr); Marbled Godwit (main/incr); Sanderling (main); Long-billed Dowitcher (main); Wilson's Phalarope (incr); Franklin's Gull (incr); Forster's Tern (incr); Black Tern (incr); LeConte's Sparrow (main); Bobolink (main)

Directional Goal: No net loss of wetlands. Maintain, restore and enhance wetland basins to increase the capacity to provide resilience to drought cycles and provide a diversity of wetland types throughout western Montana.

Measurable Objectives: Protect, restore and/or enhance 170,710 ac of wetlands in the IWJV portion of Montana by 2015, emphasizing the 106,830 ac of wetlands in the 11 BHCAs selected to target this habitat type. Emphasize projects that include associated priority upland habitat types (grassland, shrubsteppe, riparian).

Threats: Drainage, conversion through tilling and filling has resulted in a continual loss of small wetland acres in Montana. These threats are compounded by recent drought conditions. Lakeshores in western Montana are severely threatened by development and increases in human impacts such as water quality changes and disturbance of nesting birds. Invasive aquatic and semi-aquatic plants (e.g. Purple loosestrife) are a growing concern in many areas. Water level management is a primary concern on reservoirs and managed wetland systems.

Desired Future Condition(s): Wetlands should be managed to preserve or mimic natural water level fluctuations and to encourage diverse natural plant communities, including submerged, emergent and riparian vegetation. Wherever possible, wetland complexes should be protected and managed with adjoining uplands to provide nesting cover for waterfowl, shorebirds and waterbirds. Where known colonies of priority birds exist, wetlands should be managed to provide both security and appropriate feeding habitats for the species in question.

Occurrence in IWJV: 395,550 ac (Water, in part); 179,725 ac (Riparian Herbaceous)
(Combined BCR totals: BCR10: 567,239; BCR17: 7,035)

Total in BHCAs (% of IWJV total): 94,047 ac Water (24%); 76,663 ac Riparian Herbaceous (43%)

Individual BHCA Opportunities and Strategies: Eleven BHCAs were selected with wetlands as a primary target habitat (#1,2,7,8,9,10,12,16,17,19,21). These include such important wetland complex areas as the forested pothole areas of the Swan Valley, the glacial potholes of the Mission Valley and Rocky Mountain Front, the river oxbows of the Flathead, Bull and Madison (at Ennis) Rivers, and the refuges of the Centennial and Mission Valleys. The Montana Wetland Legacy program is serving as the lead for coordinating wetland conservation in the state, and will assist partnerships with NAWCA proposals. Wetlands will continue to be the focal point around which Montana's most effective conservation partnerships are formed.

II. Priority B Habitats

CEDAR/HEMLOCK FOREST

Priority Species: Vaux's Swift (main); Red-naped Sapsucker (main); Olive-sided Flycatcher (incr 100%); Hammond's Flycatcher (main); Chestnut-backed Chickadee (main); Golden-crowned Kinglet (main); Winter Wren (main); Brown Creeper (main); Townsend's Solitaire (main); Varied Thrush (main); Townsend's Warbler (main).

Directional Goal: Retain all existing old-growth stands and double the acreage of this habitat by targeting stands in other cover types that were historically in cedar-hemlock, especially in areas adjacent to existing old-growth stands.

Measurable Objectives: Manage mature stands old-growth recruitment, with a goal of 35% of the habitat in old growth condition, and double the amount of earlier successional stands on 23,444 ac of this habitat by 2015. Focus efforts on the 21,885 ac of this type in the two BHCAs selected to target cedar-hemlock (#1, 12).

Threats: The current amount of old-growth cedar-hemlock is much reduced compared to historic levels, primarily due to logging. Fragmentation of stands continues to be a threat,

particularly in valley bottom habitats. Many of the species that are near obligates for this habitat (e.g. Vaux's Swift, Winter Wren) require large snags and downed material, which will not be recruited into mature stands without protection and guided management.

Desired Future Condition(s): Mature to old growth stands with a relatively closed canopy, small patches of dense undergrowth (particularly paper birch), large diameter (>65 cm), tall (>25m) snags, large trees, and much downed woody material.

Occurrence in IWJV: 141,539 ac

Total in BHCAs (% of IWJV total): 23,444 ac (17%)

Individual BHCA Opportunities and Strategies: Both the Swan Valley (BHCA 1) and the Bull River (12) have significant acreage of this habitat on USFS lands; the latter includes the best remaining stands of mature and old-growth cedar in the state. More than half the acreage of this type in the Swan Valley is on State or private lands; only about 30% of the >17,000 ac of this type in the Bull River is non-federal, but some of the most productive lands are likely to be on valley-bottom, privately-owned lands. Conservation of these stands may be combined with riparian/wetland project work in these BHCAs.

WHITEBARK PINE

Priority Species: Clark's Nutcracker (main)

Directional Goal: Maintain existing and reestablish pure and mixed stands of whitebark pine dominated by blister rust-resistant trees, with reduced potential of stand-replacement fire.

Measurable Objectives: Protect, restore and enhance 12,496 ac of whitebark pine stands by 2015. Emphasize the 6,855 ac in the one BHCA selected to target this habitat (#16).

Threats: Continued mortality is occurring in whitebark pine stands, due to blister rust, mountain pine beetle, and the effects of stand replacement fires following encroachment of dense other conifer species.

Desired Future Condition(s): Stands should be managed for a diversity of structure, with both older trees and regeneration, in a variety of growth forms, in both islands of pure whitebark pine and in mixture with spruce and subalpine fir. Reduce proximity of lodgepole pine (pine beetle) and currant (blister rust) where possible to reduce mortality risk from these secondary hosts.

Occurrence in IWJV: 814,673 ac (all in BCR10)

Total in BHCAs (% of IWJV total): 12,496 ac (2%)

Individual BHCA Opportunities and Strategies: Opportunities to bring about conservation of whitebark pine through partnerships are somewhat limited. The USFS and National Park Service are both working on research into blister-rust resistant stands, and on the reestablishment of natural fire regimes in whitebark stands. BHCAs #5,6, and 10 in particular all have some potential for whitebark pine management, with those two agencies taking the lead, in addition to BCHA 16, where >6,000 ac of this type occur on USFS and BLM land.

MIXED MESIC FOREST

Priority Species: Northern Goshawk (main); Spruce Grouse (main); Great Gray Owl (main); Williamson's Woodpecker (main); American Three-toed Woodpecker (main); Hammond's Flycatcher (main); Cassin's Vireo (main); Townsend's Solitaire (main); Townsend's Warbler (main); Western Tanager (main)

Directional Goal: Manage for no net loss of old-growth stands (>170 yr old), and maintain mature and over mature stands for recruitment as old growth, toward a goal of 20% of this habitat managed for old-growth conditions.

Measurable Objectives: Restore, protect, and/or manage to enhance 1,087,120 ac of mature, mixed mesic forest in the IWJV portion of Montana by 2015, to move stands toward old-growth conditions.

Threats: Logging and stand-replacing fires have been the primary causes of the reduction in old-growth acreage in this type, which is the seral stage preferred by our priority bird species. Fragmentation is an issue as well, although USFS guidelines do call for distributing old-growth stands throughout all 4th-order watersheds where feasible. Insects and disease, while potentially considered as threats if they reach epidemic proportions, actually create the structural components preferred by priority bird species (e.g. spatial and structural heterogeneity, snags).

Desired Future Condition: Most of western Montana's managed landscape is characterized by a diversity of seral stages of this habitat. The primary need is to protect and expand the number of stands with old-growth characteristics, including large (>40 cm diameter) trees, particularly larch, broken-topped live trees and snags (>8/ac, with at least 20% >50cm in diameter), downed woody material (~40 logs/ac), and spatial heterogeneity including small openings with dense regeneration. Old-growth stands should be at least 50-100 ac in size, embedded in larger blocks of 350-1000 ac of mature or partially-cut forest.

Occurrence in IWJV: 5,990,863 ac (BCR10: 5,990,345; BCR17: 518 ac)

Total in BHCAs (% of IWJV total): 1,087,120 ac (18%)

Individual BHCA Opportunities and Strategies: Mixed forests are the most abundant and widespread habitats considered in this plan. Because they are often the matrix within which higher priority habitats are embedded, they occur in most BHCAs, even though none were selected specifically to target this habitat. Most of this habitat is on public (managed) lands, but in some areas there is a real opportunity for state, federal and private lands cooperation. For example, in the Swan Valley, where nearly a quarter (249,000 ac) of the BHCA total for this habitat is found, 46% is on USFS land, 13% on State land, and 40% on private lands. The Montana Forest Legacy Program has been a primary tool for accomplishing forest conservation objectives here and elsewhere in western Montana.

JUNIPER/LIMBER PINE

Priority Species: Plumbeous Vireo (main); Clark's Nutcracker (main)

Directional Goal: Maintain the current amount and distribution of juniper and limber pine woodlands.

Measurable Objectives: Manage 28,036 ac of juniper and limber pine in western Montana by 2015 to maintain ecosystem health and provide seed crops for birds dependent on these types.

Threats: At higher elevations, threats to limber pine habitats are as described for whitebark pine. At lower elevations, over-grazing, invasion of exotics, and fire can all have impacts on the quality and quantity of this habitat. Oil and gas exploration has caused some fragmentation of this habitat, and is a continued threat.

Desired Future Condition(s): Healthy stands of limber pine and juniper should include mature and decadent trees, snags, and regeneration. Crowns should be vigorous and seed/fruit-bearing. Understory should be native grasses and forbs.

Occurrence in IWJV: 169,946 ac (BCR10: 169,501; BCR17: 444 ac)

Total in BHCAs (% of IWJV total): 28,036 ac (16%)

Individual BHCA Opportunities and Strategies: No BHCAs were selected specifically for this lower priority habitat. Significant acreage occurs in three of the original BHCAs that fall outside the IWJV along the Rocky Mountain Front (BHCAs 13, 14), and in the Pryor Mountains (18). Ownership is a diverse mix of BLM, USFS, private and tribal lands. Land-use planning and livestock management are the two major tools available to preserve this habitat whenever it occurs.

CONIFEROUS RIPARIAN

Priority Species: Barrow's Goldeneye (main); Harlequin Duck (incr); Bald Eagle (main); Vaux's Swift (main); Hammond's Flycatcher (main); Cordilleran Flycatcher (main); American Dipper (main); Townsend's Warbler (main)

Directional Goal: Manage for no net loss of coniferous riparian forests, with a goal of 25% of low elevation stands and 50% of the stands in mid to upper elevation sites in mature to old-growth condition.

Measurable Objectives: Protect, restore, and/or enhance 35,219 ac of riparian coniferous forest by 2015, emphasizing the 30,819 ac in BHCAs selected for riparian forest conservation, particularly within the known breeding range of the Harlequin Duck in the state.

Threats: Logging and stand replacement fires resulting from past fire suppression are the biggest threats to mature stands of this type. Long-term grazing impact in some cases can reduce vegetative cover necessary to nesting and food production, as can streambank or channel alterations (channelization, diversion dams, gravel extraction, etc.)

Desired Future Condition(s): Coniferous riparian zones should be represented by the full range of seral conditions that would result following natural disturbance regimes. Old-growth characteristics (large trees, snags, and downed woody material) should be present on 25-50% of the acreage.

Occurrence in IWJV: ~135,749 ac (all in BCR10)

Total in BHCAs (% of IWJV total): 35,219 ac (~26%)

Individual BHCA Opportunities and Strategies: Coniferous riparian forests were not singled out for BHCA selection, but are represented in all the 15 BHCAs selected for riparian conservation in general (#1,2,4,7,8,9,10,11,12,15,16,19,20,21,22,23). The most opportunity exists in the Blackfoot (10), Centennial (16), Bull River (12) and Bitterroot (8) valleys, where most of the coniferous riparian habitat is on private land; and there are active partnerships working on existing or future NAWCA projects in each of these BHCAs. As described for other riparian types, conservation projects will usually include a full range of riparian habitats and wetlands. In many cases, opportunities may exist to combine avian habitat conservation objectives with fisheries conservation, particularly where MFWP and the USFWS are prioritizing native fish species recovery.

AGRICULTURAL

Priority Species: Mallard (incr); Northern Pintail (incr); American Wigeon (incr); Ferruginous Hawk (main); Golden Eagle (main); Sandhill Crane (incr); Long-billed Curlew (incr); Bobolink (main/incr)

Directional Goal: Encourage the conversion of agricultural habitat to native grassland, wetland and shrubsteppe habitat wherever possible. Implement Farm Bill programs on the maximum possible acreage, and discourage the continued conversion of agricultural land to residential and industrial uses.

Measurable Objectives: Protect, restore and/or enhance 597,070 ac of agricultural lands in western Montana by 2015 to improve their value to priority bird species.

Threats: Many agricultural practices such as conversion of native grassland to cropland, spraying, harvest during the nesting season, and extensive monocultures can have negative impacts on bird habitat. But agricultural lands often offer opportunities for restoration, innovative farming practices, planting of cover and food crops, and important feeding and staging areas for waterfowl and cranes. These values are threatened in much of western Montana by population growth and explosive residential and industrial development.

Desired Future Condition(s): Use grazing regimes in agricultural pasturelands that provide residual cover for ground-nesting birds. Use NRCS programs to restore native grassland, shrubland, riparian and wetland habitats. Where restoration is not possible, use tools to maintain agriculture on the landscape to preserve future opportunities, while working to minimize pesticide use, over-grazing and haying during the nesting season.

Occurrence in IWJV: 1,201,066 ac (BCR10: 1,197,445 ac; BCR17: 3,621 ac)

Total in BHCAs (% of IWJV total): 597,070 ac (50%)

Individual BHCA Opportunities and Strategies: Although opportunities for effective conservation of bird species in need may be limited in many agricultural environments, they can often serve as a buffer for important wetland and riparian habitats, particularly in the western valleys of Montana, where profuse development is threatening the ecological integrity of landscapes. The protection and restoration of agricultural lands may be our best approach to meeting the needs of wetland and grassland birds in particular, in BHCAs such as the Mission Valley (#2; 54,760 ac), Bitterroot Valley (#8; 62,255 ac), Flathead Valley (#9; 63,139 ac), and Three Forks/Gallatin (#20; 171,829 ac). Land Trusts, the NRCS, TNC and the USFWS are all working on innovative approaches to conservation in agricultural landscapes. The Montana Land Reliance, with their slogan, “Cows not Condos”, has acknowledged that agricultural landscapes offer an opportunity to preserve both traditional lifestyles and opportunities for wildlife conservation. There will be opportunities to work with agricultural lands in almost any conservation projects designed for the BHCAs in valley habitats.

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Appendix A: Comprehensive matrix of priority bird species from relevant conservation plans for Western Montana.

SPECIES	NAWCA	IW Waterbird	IW Shorebird	Montana PIF	MT NHP
Common Loon		Moderate		I	Concern
Horned Grebe		Low		II	Potential
Eared Grebe		Moderate			
Western Grebe		Moderate			
Clark's Grebe		Moderate		III	Review
American White Pelican		High		III	Concern
American Bittern		Moderate		III	
Great Blue Heron		Moderate			Review
Snowy Egret		Moderate			
Black-crowned Night-Heron		Moderate		III	Concern
White-faced Ibis		Moderate		II	Concern
Greater White-fronted Goose	Priority				
Snow Goose	Priority				
Ross's Goose	*				
Canada Goose	*				
Trumpeter Swan	Priority			I	Concern
Tundra Swan	*				
Wood Duck	Priority				
Gadwall	*				
Eurasian Wigeon	*				
American Wigeon	Priority				
Mallard	High				
Blue-winged Teal	*				
Cinnamon Teal	*				
Northern Shoveler	*				
Northern Pintail	High				
Green-winged Teal	*				
Canvasback	Priority				
Redhead	Priority				
Ring-necked Duck	Priority				
Greater Scaup	High				
Lesser Scaup	High				
Harlequin Duck	*			I	Concern
Bufflehead	*				
Common Goldeneye	*				
Barrow's Goldeneye	*			II	
Hooded Merganser	*			II	
Common Merganser	*				
Red-breasted Merganser	*				
Ruddy Duck	*				
Bald Eagle				II	Concern
Northern Harrier				III	
Sharp-shinned Hawk				III	
Northern Goshawk				II	Concern
Swainson's Hawk	Priority			III	Potential
Ferruginous Hawk				II	Concern
Golden Eagle					
Gyr Falcon					
Peregrine Falcon				II	Concern
Prairie Falcon					
Ruffed Grouse				II	

Appendix A: Comprehensive matrix of priority bird species from relevant conservation plans for Western Montana (continued)

SPECIES	NAWCA	IW Waterbird	IW Shorebird	Montana PIF	MT NHP
Greater Sage-Grouse				I	Potential
Spruce Grouse					
White-tailed Ptarmigan				III	Concern
Blue Grouse				III	
Col. Sharp-tailed Grouse				II	Concern
Yellow Rail				III	Concern
Virginia Rail	Priority				
Whooping Crane					Concern
Sandhill Crane	Priority	High			
Black-bellied Plover				*	
American Golden-Plover	Priority			*	
Snowy Plover	Priority		5		
Semipalmated Plover				*	
Piping Plover				I	Concern
Killdeer			3	III	
Mountain Plover			5	I	Concern
Black-necked Stilt			5	III	Review
American Avocet	Priority		5		
Greater Yellowlegs			3	*	
Lesser Yellowlegs				*	
Solitary Sandpiper			3	*	
Willet				III	
Spotted Sandpiper			3		
Upland Sandpiper					
Whimbrel	Priority			*	
Long-billed Curlew	Priority		5	II	Potential
Hudsonian Godwit				*	
Marbled Godwit			4	II	
Ruddy Turnstone				*	
Red Knot				*	
Sanderling	Priority			*	
Semipalmated Sandpiper				*	
Western Sandpiper			4	*	
Least Sandpiper			4	*	
White-rumped Sandpiper				*	
Baird's Sandpiper				*	
Pectoral Sandpiper				*	
Dunlin				*	
Stilt Sandpiper				*	
Buff-breasted Sandpiper				*	
Short-billed Dowitcher				*	
Long-billed Dowitcher			5	*	
Wilson's Snipe			3		
Wilson's Phalarope	Priority		5	III	Review
Red-necked Phalarope			4		
Franklin's Gull		High		II	Concern
California Gull		Low			
Caspian Tern		Moderate		II	Concern
Common Tern		Low		II	Concern
Forster's Tern		High		II	Concern
Least Tern				I	Concern

Appendix A: Comprehensive matrix of priority bird species from relevant conservation plans for Western Montana (continued)

SPECIES	NAWCA	IW Waterbird	IW Shorebird	Montana PIF	MT NHP
Black Tern		High		II	Concern
Black-billed Cuckoo				II	Review
Yellow-billed Cuckoo				II	Concern
Barn Owl					Concern
Flammulated Owl				I	Concern
Western Screech-Owl				III	Review
Eastern Screech-Owl				III	Review
Northern Hawk Owl					Concern
Northern Pygmy-Owl					
Burrowing Owl				I	Concern
Great Gray Owl				III	Concern
Short-eared Owl	Priority			III	Review
Boreal Owl				III	
Common Poorwill				III	Review
Black Swift	Priority			II	Concern
Chimney Swift				III	Review
Vaux's Swift	Priority			II	
Calliope Hummingbird	Priority			II	
Broad-tailed Hummingbird					Concern
Rufous Hummingbird				III	
Lewis's Woodpecker	Priority			II	Concern
Red-headed Woodpecker				II	Concern
Williamson's Sapsucker				II	Review
Red-naped Sapsucker	Priority			II	
Downy Woodpecker				III	
Three-toed Woodpecker				II	Review
Black-backed Woodpecker				I	Concern
Pileated Woodpecker				II	
Olive-sided Flycatcher				I	Concern
Alder Flycatcher					Concern
Willow Flycatcher				II	
Least Flycatcher				III	
Hammond's Flycatcher	Priority			II	
Dusky Flycatcher					
Cordilleran Flycatcher				II	
Cassin's Kingbird					Concern
Loggerhead Shrike				II	Potential
Plumbeous Vireo				III	Review
Cassin's Vireo				III	Review
Warbling Vireo				III	
Red-eyed Vireo				II	
Clark's Nutcracker				III	
N. Rough-winged Swallow	Priority				
Mountain Chickadee					
Chestnut-backed Chickadee				III	
Boreal Chickadee					Concern
Red-breasted Nuthatch					
Pygmy Nuthatch					
Brown Creeper				I	
Winter Wren				II	
Sedge Wren				III	Concern

Appendix A: Comprehensive matrix of priority bird species from relevant conservation plans for Western Montana (continued)

SPECIES	NAWCA	IW Waterbird	IW Shorebird	Montana PIF	MT NHP
Marsh Wren					
American Dipper					
American Dipper	Priority			III	
Golden-crowned Kinglet				III	
Blue-gray Gnatcatcher					Concern
Eastern Bluebird					Concern
Mountain Bluebird					
Townsend's Solitaire				III	
Veery				II	
Varied Thrush				III	
Gray Catbird				III	
Sage Thrasher				III	Review
Sprague's Pipit				I	Concern
Bohemian Waxwing					
Tennessee Warbler					Review
Nashville Warbler				III	
Townsend's Warbler				III	
Black-and-white Warbler					Concern
American Redstart				III	
Ovenbird				III	Review
MacGillivray's Warbler	Priority			III	
Western Tanager					
Green-tailed Towhee				III	
Chipping Sparrow				III	
Clay-colored Sparrow				III	
Brewer's Sparrow				II	Potential
Lark Sparrow				III	
Sage Sparrow					Review
Lark Bunting				II	Potential
Grasshopper Sparrow				II	Potential
Baird's Sparrow				I	Concern
LeConte's Sparrow				III	Concern
Nelson's Sharp-tailed Sparrow				III	Concern
Song Sparrow				III	
McCown's Longspur				II	Potential
Chestnut-collared Longspur				II	Potential
Lazuli Bunting				II	
Dickcissel					Concern
Bobolink	Priority			III	Review
Red-winged Blackbird				III	
Yellow-headed Blackbird				III	
Brewer's Blackbird				III	
Orchard Oriole				III	Review
Black Rosy-Finch				II	Concern
Cassin's Finch				III	
Red Crossbill				III	

* All waterfowl receive a level of priority consideration in NAWCA proposals; all transient shorebird species were acknowledged as a priority in the Montana PIF BCP.

Appendix B: Habitat Associations of priority bird species in Western Montana

GRASSLAND habitat association matrix for IWJV, Western Montana. Higher priority species and habitats are listed in **bold**.

Priority Species	Intermountain	Mixed Grass Prairie	
		Shortgrass	Mixed(mid)
Mallard	x	x	x
Northern Pintail	x	x	x
American Wigeon	x	x	x
Lesser Scaup	x	x	x
Northern Harrier	x	x	x
Ferruginous Hawk		x	x
Golden Eagle	x	x	x
Prairie Falcon	x	x	x
(Columbian) Sharp-tailed Grouse	x		
Mountain Plover		x	
Willet		x	x
Upland Sandpiper		x	x
Long Billed Curlew	x	x	x
Marbled Godwit		x	x
Wilson's Phalarope	x	x	x
Burrowing Owl		x	x
Short-eared Owl	x	x	x
Loggerhead Shrike	x	x	x
Sprague's Pipit			x
Lark Bunting		x	x
Baird's Sparrow			x
Grasshopper Sparrow	x	x	x
McCown's Longspur		x	
Chestnut-collared Longspur		x	x
Bobolink	x		x

Appendix B: Habitat Associations of priority bird species in Western Montana (continued)

SHRUBLAND habitat association matrix for IWJV, Western Montana. Higher priority species and habitats are listed in **bold**.

Priority Species	Sagebrush Steppe	Montane
Ferruginous Hawk	x	
Greater Sage-Grouse	x	
Columbian Sharp-tailed Grouse		x
Common Poorwill		
Calliope Hummingbird		x
Dusky Flycatcher	x	x
Loggerhead Shrike	x	
Sage Thrasher	x	
Nashville Warbler		x
MacGillivray's Warbler		x
Lazuli Bunting		x
Green-tailed Towhee	x	x
Clay-colored Sparrow	x	
Brewer's Sparrow	x	x
Lark Sparrow	x	
Sage Sparrow	x	

Appendix B: Habitat Associations of priority bird species in Western Montana (continued)

FOREST habitat association matrix for IWJV, Western Montana, April 2003. Higher priority species and habitats are listed in **bold**.

Priority Species	Dry Pine	Burned Forest	Aspen	Whitebark Pine	Juniper	Spruce-fir	Cedar-Hemlock
Northern Goshawk	x					x	
Ruffed Grouse			x				
Blue Grouse	x					x	
Spruce Grouse						x	
Flammulated Owl	x						
Western Screech-owl	x						
Great Gray Owl	x		x			x	
Boreal Owl						x	
Common Poorwill	x						
Vaux's Swift						x	x
Lewis' Woodpecker	x	x					
Williamson's Sapsucker	x	x					
Red-naped Sapsucker	x	x	x				x
Three-toed Woodpecker	x	x				x	
Black-backed Woodpecker	x	x				x	
Pileated Woodpecker	x	x				x	
Olive-sided Flycatcher	x	x				x	x
Hammond's Flycatcher	x					x	x
Dusky Flycatcher	x						
Cordilleran Flycatcher	x						
Plumbeous Vireo	x				x		
Cassin's Vireo							
Warbling Vireo							
Pinyon Jay	x				x		
Clark's Nutcracker				x	x		
Chestnut-backed Chickadee							x
Pygmy Nuthatch	x						
Brown Creeper						x	x
Golden-crowned Kinglet							x
Winter Wren							x
Mountain Bluebird	x	x	x		x		
Townsend's Solitaire	x					x	x
Varied Thrush						x	x
Townsend's Warbler	x					x	x
Ovenbird	x		x				
Western Tanager	x						
Cassin's Finch	x						
Red Crossbill	x					x	

Appendix B: Habitat Associations of priority bird species in Western Montana (continued)

RIPARIAN habitat association matrix for IWJV, Western Montana. Higher priority species and habitats are listed in **bold**.

Priority Species	Deciduous Woodland	Riparian Shrubland	Coniferous Riparian	Herbaceous Riparian
Wood Duck	x			
Barrow's Goldeneye	x		x	
Harlequin Duck			x	
Hooded Merganser	x		x	
Bald Eagle	x		x	
Sharp-shinned Hawk			x	
Swainson's Hawk	x			
Peregrine Falcon	x	x	x	x
Ruffed Grouse	x			
Greater Sage-Grouse				x
Columbian Sharp-tailed Grouse	x			
Black-billed Cuckoo	x	x		
Yellow-billed Cuckoo	x	x		
Eastern Screech-owl	x			
Western Screech-owl	x			
Black Swift	x		x	
Vaux's Swift	x		x	
Calliope Hummingbird		x		
Rufous Hummingbird		x		
Lewis's Woodpecker	x			
Red-naped Sapsucker	x			
Downy Woodpecker	x		x	
Willow Flycatcher	x	x		
Least Flycatcher	x			
Hammond's Flycatcher			x	
Cordilleran Flycatcher	x	x	x	
Northern Rough-winged Swallow	x	x		
American Dipper			x	
Veery	x			
Gray Catbird	x	x		
Warbling Vireo	x	x	x	
Red-eyed Vireo	x			
Nashville Warbler	x	x		
Townsend's Warbler			x	
American Redstart	x	x		
Ovenbird	x			
MacGillivray's Warbler		x	x	
Lazuli Bunting		x		
Song Sparrow		x		
Orchard Oriole	x			

Appendix B: Habitat Associations of priority bird species in Western Montana (continued)

WETLAND habitat association matrix, Western Montana. Higher priority species and habitat are in **bold**. Habitats listed can occur within all wetland types (Intermountain, Prairie Pothole, Reservoirs).

Priority Species	Wet Meadow	Marsh	Open Water	Saline Playa
Common Loon		x	x	
Horned Grebe		x	x	
Eared Grebe		x	x	
Western Grebe		x	x	
Clarks Grebe		x	x	
American White Pelican		x	x	
American Bittern	x	x		
Black-crowned Night Heron	x	x		
White-faced Ibis	x	x		
Trumpeter Swan		x	x	
Greater White-fronted Goose		x	x	
Snow Goose		x	x	
Mallard		x	x	
Pintail		x	x	
American Wigeon		x	x	
Redhead		x	x	
Canvasback		x	x	
Ring-necked Duck		x	x	
Greater Scaup		x	x	
Lesser Scaup		x	x	
Barrow's Goldeneye			x	
Bald Eagle		x	x	
Peregrine Falcon	x	x	x	
Black-bellied Plover	x	x		
American Golden Plover	x	x		
Black-necked Stilt	x	x		x
American Avocet	x	x		x
Willet				
Solitary Sandpiper	x	x		
Whimbrel				
Long-billed Curlew	x			x
Marbled Godwit				
Sanderling				
Western Sandpiper				
Least Sandpiper				
Long-billed Dowitcher	x	x		
Wilson's Phalarope	x	x		x
Franklin's Gull	x	x	x	
Caspian Tern		x	x	
Common Tern		x	x	
Forster's Tern		x		
Black Tern	x	x		
Short-eared Owl	x	x		
Le Conte's Sparrow	x			
Bobolink	x			

Appendix C: Reclassification of MT Gap Types into the Cover Types Used to Derive Habitat Acreage/Objectives in Bird Habitat Conservation Areas in Western Montana

COVER TYPE	NAME	NEW CODE	MT PIF TYPE/NEW
2010	Agricultural Lands - Dry	2000	Agricultural
2020	Agricultural Lands - Irrigated	2000	Agricultural
3130	Very Low Cover Grasslands	3100	Prairie Grassland
3150	Low/ Moderate Cover Grasslands	3100	Prairie Grassland
3170	Moderate/ High Cover Grasslands	3100	Prairie Grassland
3180	Montane Parklands & Subalpine Meadows	3180	Intermountain Grassland
3200	Mixed Mesic Shrubs	3250	Montane Shrubland
3300	Mixed Xeric Shrubs	3250	Montane Shrubland
3510	Mesic Shrub-Grassland Associations	3250	Montane Shrubland
3309	Silver Sage	3311	Other Shrub
3310	Salt-Desert Shrub/ Dry Salt Flats	3311	Other Shrub
3350	Sagebrush	3400	Sagebrush Steppe
3520	Xeric Shrub-Grassland Associations	3400	Sagebrush Steppe
4000	Low Density Xeric Forest	4200	Dry Forest
4206	Ponderosa Pine	4200	Dry Forest
4290	Mixed Xeric Forest	4200	Dry Forest
4205	Limber Pine	4222	Juniper/Limber Pine
4214	Rocky Mountain Juniper	4222	Juniper/Limber Pine
4216	Utah Juniper	4222	Juniper/Limber Pine
4203	Lodgepole Pine	4233	Dry Fir-Lodgepole
4223	Douglas-Fir/ Lodgepole Pine	4233	Dry Fir-Lodgepole
4207	Grand Fir	4255	Mixed Mesic Forest
4212	Douglas-Fir	4255	Mixed Mesic Forest
4215	Western Larch	4255	Mixed Mesic Forest
4280	Mixed Mesic Forest	4255	Mixed Mesic Forest
4260	Mixed Whitebark Pine Forest	4260	Whitebark Pine
4270	Mixed Subalpine Forest	4270	Wet Subalpine Fir
4210	Western Red Cedar	4299	Cedar-Hemlock Forest
4211	Western Hemlock	4299	Cedar-Hemlock Forest
4140	Mixed Broadleaf Forest	4350	Aspen
4300	Mixed Broadleaf & Conifer Forest	4350	Aspen
4400	Standing Burnt Forest	4400	Burned Forest
5000	Water	5000	Water
6110	Conifer Riparian	6110	Riparian Coniferous Forest
6120	Broadleaf Riparian	6125	Riparian Deciduous Forest
6130	Mixed Broadleaf & Conifer Riparian	6125	Riparian Deciduous Forest
6400	Mixed Riparian	6125	Riparian Deciduous Forest
6200	Graminoid & Forb Riparian	6200	Riparian Herbaceous
6300	Shrub Riparian	6300	Riparian Shrubland
1100	Urban Or Developed Lands	7000	Unvegetated/Other
3110	Altered Herbaceous	7000	Unvegetated/Other
7300	Rock	7000	Unvegetated/Other
7500	Mines, Quarries, Gravel Pits	7000	Unvegetated/Other
7600	Badlands	7000	Unvegetated/Other
7604	Missouri Breaks	7000	Unvegetated/Other
7800	Mixed Barren Sites	7000	Unvegetated/Other
9100	Snowfields Or Ice	7000	Unvegetated/Other
9800	Clouds	7000	Unvegetated/Other
9900	Cloud Shadows	7000	Unvegetated/Other

8100

Alpine Meadows

8100

Alpine Meadows

Appendix D: Digital Mapping Output, MT Bird Habitat Conservation Areas (BHCAs)

**TOTAL ACREAGE FOR ALL
BHCAS IN MONTANA**

BHCA:	1	2	3	4	5	6	7
Priority A:							
Grassland	13,204	103,264	8,983	17,510	5,030	20,142	26,200
Sagebrush Steppe	52	70,915	1,139	1,771			
Dry Forest	8,569	7,976	25,171	29,769	14,109	33,056	30,978
Aspen	9,858	386	276	1,785	5,680	9,479	12,826
Burned Forest	172			10		1,693	
Riparian Deciduous Forest	6,765	1,663	578	2,814	464	480	2,134
Riparian Shrubland	2,070	2,096	316	2,356	24	190	1,149
Priority B:							
<i>Agriculture</i>	16	54,760	941	1,069		276	4,139
<i>Juniper / Limber Pine</i>	16						
<i>Mixed Mesic Forest</i>	249,017	37,295	40,073	30,051	46,230	59,256	94,845
<i>Whitebark Pine</i>	370	184			1,153	1,253	208
<i>Cedar-hemlock Forest</i>	4,429	126		430	390	2	294
<i>Water</i>	9,621	6,697	180	15,960	809	366	5,156
<i>Riparian Coniferous Forest</i>	1,877	1,221	528	2,438	30	72	108
<i>Riparian Herbaceous</i>	184	1,759	74	444	12	174	316
Priority C:							
<i>Montane Shrubland</i>	20,104	14,297	8,895	15,816	2,378	13,402	4,582
<i>Other Shrub</i>							
<i>Dry Fir/Lodgepole</i>	62,260	1,787	6,923	1,329	17,846	13,012	14,385
<i>Wet Subalpine Fir Forest</i>	18,817	2,392	1,191		16,441	7,170	2,688
<i>Unvegetated / Other</i>	5,042	22,786	4,620	8,539	9,523	13,424	5,714
<i>Alpine Meadows</i>		8					
Subtotals:	412,443	329,613	99,889	132,092	120,119	173,448	205,723

Appendix D: Digital Mapping Output, MT Bird Habitat Conservation Areas (BHCAs), (continued)

**TOTAL ACREAGE FOR ALL
BHCAS IN MONTANA**

BHCA:	8	9	10	11	12
Priority A:					
Grassland	128,095	57,320	196,476	13,991	9,109
Sagebrush Steppe	27,737		4,031	895	
Dry Forest	95,964	4,063	55,097	2,946	15,390
Aspen	5,849	16,693	12,007	883	10,588
Burned Forest	142		136	232	
Riparian Deciduous Forest	4,021	9,573	7,524	502	3,138
Riparian Shrubland	6,241	7,174	10,930	302	1,103
Priority B:					
Agriculture	63,255	63,139	13,721	5,162	5,913
Juniper / Limber Pine		10			
Mixed Mesic Forest	120,790	89,209	98,528	4,616	98,364
Whitebark Pine	632		975		30
Cedar-Hemlock Forest		316			17,456
Water	1,607	9,679	2,552	1,341	3,873
Riparian Coniferous Forest	2,672	2,050	7,820	602	2,858
Riparian Herbaceous	3,102	1,669	785	224	82
Priority C:					
Montane Shrubland	53,579	4,946	41,434	667	14,711
Other Shrub					
Dry Fir / Lodgepole	75,448	5,396	90,260	200	15,580
Wet Subalpine Fir Forest	43,159	2,200	27,968		7,634
Unvegetated / Other	71,756	19,077	13,330	8,270	3,697
Alpine Meadows			26		
Subtotals:	704,051	292,515	583,600	40,834	209,526

Appendix D: Digital Mapping Output, MT Bird Habitat Conservation Areas (BHCAs), (continued)

**TOTAL ACREAGE FOR ALL
BHCAS IN MONTANA**

BHCA:	15	16	17	19	20	21
Priority A:						
Grassland	6,185	367,665	86,135	30,704	77,534	6,367
Sagebrush Steppe		702,726	110,536	2,230	8,358	651
Dry Forest	4,850	6,147	370	140	2,222	214
Aspen	330	20,934	3,925	1,535	2,848	186
Burned Forest	144	102				
Riparian Deciduous Forest	442	11,973	14,037	2,320	4,988	1,091
Riparian Shrubland	318	31,564	17,223	1,611	3,162	877
Priority B:						
<i>Agriculture</i>	3,915	14,469	72,860	5,865	171,829	2,884
<i>Juniper / Limber Pine</i>		15,644		2,616	234	
<i>Mixed Mesic Forest</i>	17,017	64,956	11,669	492	1,759	424
<i>Whitebark Pine</i>	4	6,855	106			
<i>Cedar-hemlock Forest</i>						
<i>Water</i>	8	10,226	955	4,153	1,121	5,418
<i>Riparian Coniferous Forest</i>	372	3,703	2,660	707	1,115	610
<i>Riparian Herbaceous</i>	100	27,311	11,453	232	5,250	
Priority C:						
Montane Shrubland	833	35,916	19,615	146	3,461	985
Other Shrub	1,055				174	
Dry Fir / Lodgepole	653	39,581	34,571	4	186	
Wet Subalpine Fir Forest		51,070	13,667		208	
Unvegetated / Other	5,018	49,310	1,401	494	8,547	62
Alpine Meadows		699				
Subtotals:	41,244	1,460,851	401,183	53,249	292,997	19,769

Appendix D: Digital Mapping Output, MT Bird Habitat Conservation Areas (BHCAs), (continued)

TOTAL ACREAGE FOR ALL BHCAS IN MONTANA

BHCA:	22	23	24	25	TOTAL
Priority A:					
Grassland	67,304	95,792	72,904	133,481	1,543,395
Sagebrush Steppe	640	25,177	2,470	63,431	1,022,760
Dry Forest	1,958	8,216	37,989	7,320	392,514
Aspen	3,911	1,960	62	2,190	124,192
Burned Forest		148	1,779		4,560
Riparian Deciduous Forest	8,475	4,445	1,205	4,568	93,202
Riparian Shrubland	8,086	1,609	1,797	2,776	102,976
Priority B:					
Agriculture	39,485	20,908	12,306	40,159	597,070
Juniper / Limber Pine	657	3,136	3,231	2,492	28,036
Mixed Mesic Forest	1,407	10,494	9,045	1,581	1,087,120
Whitebark Pine		725			12,496
Cedar-Hemlock Forest					23,444
Water	616	3,305	10,108	294	94,047
Riparian Coniferous Forest	2,182	468	1,125		35,219
Riparian Herbaceous	154	5,346	953	17,037	76,663
Priority C:					
Montane Shrubland	4,936	1,795	9,856	6,025	278,378
Other Shrub		867		24	2,120
Dry Fir / Lodgepole	24	6,519	683	795	387,442
Wet Subalpine Fir Forest	22	4,960	368	506	200,459
Unvegetated / Other	1,399	30,287	17,654	30,394	330,344
Alpine Meadows					733
Subtotals:	141,255	226,159	183,534	313,072	6,437,169

Appendix E: Habitat Acreages for Western Montana (BCR 10)

Cover Types in the IWJV in Montana - BCR10	Acres
Agricultural	1,201,066
Grassland	6,315,221
Mountain Shrubland	1,055,768
Other Shrub	1,485
Sagebrush Steppe	2,141,959
Other Forest	4,920,879
Dry Ponderosa / Fir Forest	1,772,985
Juniper / Pine Woodlands	169,946
Mid-Elevation Mixed Conifer	5,990,863
Spruce-Fir	3,396,490
Aspen Woodland	385,631
Water	394,550
Riparian Woodland	396,113
Riparian Herbaceous	179,725
Riparian Shrubland	229,430
Unvegetated / Other	1,609,120
Total	30,161,229